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SMITHSONIAN INSTITUTION

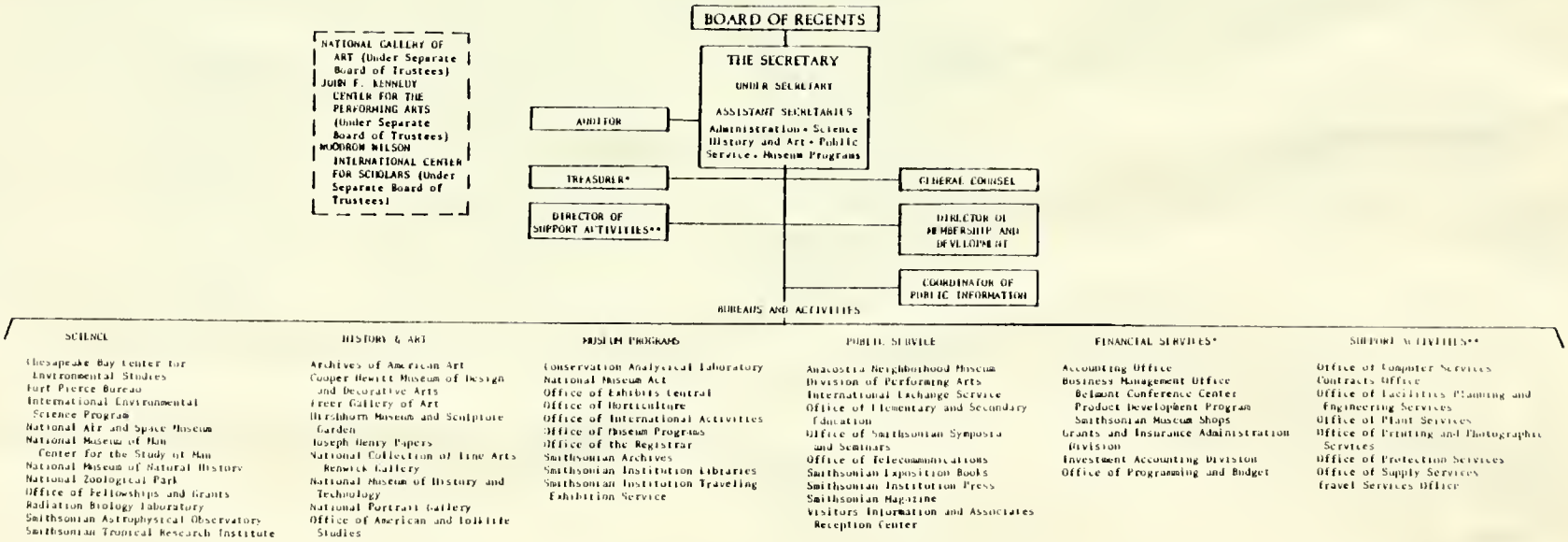
Budget Justifications for Fiscal Year 1980

Submitted to the Committees on Appropriations

Congress of the United States

January 1979

SMITHSONIAN INSTITUTION



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SMITHSONIAN INSTITUTION

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GENERAL STATEMENT

Organization and Performance

Founded in 1846, the Smithsonian Institution is an independent, Federal establishment devoted to public education, research and national service in the arts, science and history. Centered on the Mall in Washington, the Institution operates major facilities and activities throughout the country and overseas. It is one of the world's leading research centers and encompasses the world's largest museum complex, attracting approximately 25 million visitors annually to its museums, galleries and zoological park. Additional millions also view Smithsonian traveling exhibitions, which appear across the United States and abroad, and the annual Folklife Festival. As custodian of the National Collections, the Smithsonian possesses more than 78 million art objects, natural history specimens and artifacts. These collections are displayed for the enjoyment and education of visitors and are available for research by the staff of the Institution and by hundreds of visiting students, scientists and historians each year. Other significant study efforts draw their data and results directly from terrestrial, marine and astrophysical observations at various Smithsonian installations.

The Smithsonian complex presently consists of ten exhibition buildings in Washington, D.C. and New York City in the fields of science, history, technology, and art; a zoological park and an animal conservation and research center near Front Royal, Virginia; the Anacostia Neighborhood Museum, which performs research and exhibit activities and conducts an exhibits production training program in a low-income area of the city in cooperation with the community; a preservation, storage, and air and spacecraft display facility at Suitland, Maryland; a conference center at Elkridge, Maryland; two natural preserves, in Panama and on the Chesapeake Bay; an oceanographic research facility in Fort Pierce, Florida; astrophysical stations in Cambridge, Massachusetts, Mt. Hopkins, Arizona, and elsewhere; and supporting administrative, laboratory and storage areas. In addition, the Museum of African Art is expected to become part of the Smithsonian Institution during FY 1979.

Smithsonian Goals

The broad goal of the Smithsonian Institution is to promote the increase and diffusion of knowledge. To accomplish this goal, the Smithsonian conducts a wide range of programs alone and in cooperation with other institutions, universities, and government agencies in the United States and abroad. These programs include:

-- Collections management, which includes the receipt, accessioning, documentation and care of specimens and objects. The Smithsonian Institution has the legal responsibility (20 U.S.C. 59) to serve as the official repository of the National Collections which contain more than 78 million art objects, natural specimens and artifacts.

-- Basic research, which provides baseline data for policy planners in mission-oriented agencies. Scientific research at the Smithsonian covers a broad spectrum of disciplines spanning the physical and biological sciences. Results obtained from long-term research projects form the basis for applied research by others directed toward solving pressing national needs. Historical research enhances knowledge of this nation's growth through studies of its technological development, its art, and its folklife and folklore traditions.

-- Public service programs, which include exhibits, performances and educational services offered in Washington, D.C. and throughout the country, by means of the Smithsonian Institution Traveling Exhibition Service, the Division of Performing Arts, and the National Associates and Resident Associates Programs. The Institution's Office of Museum Programs offers assistance to museums throughout the country and abroad through programs including museum training courses, distribution of data on conservation principles and techniques, and grants to museums. Other educational activities include radio, television, motion picture programs, the magazine Smithsonian which is now received by nearly 1.7 million Resident and National Associates, the Archives of American Art Journal, and scholarly publications.

-- Collection acquisitions to add selectively to the National Collections to improve their quality and coverage. While the Smithsonian will continue to rely heavily on donated works of art, artifacts and other objects, it is very important that such acquisitions be supplemented with purchases. Acquisitions funds are required to replace and upgrade the quality of objects already in the collections, as well as to acquire particular objects in order either to establish fully representative reference collections or to display them in a new exhibition.

FY 1980 Budget Priorities

The priorities set forth in the FY 1980 budget request are the product of a thorough zero-base analysis to determine where resources--both those in the base and requested increases--can be applied most effectively. As a result of the zero-base process, approximately $400,000 in existing base resources in the Salaries and Expenses appropriation is proposed for reapplication to meet highest priority program needs. Together with the $1.6 million in base resources that were reapplied in FY 1979, the Institution will have reallocated approximately $2.0 million in base resources over a two year period to cover highest priority program requirements before any budget increases were sought. A further result of the zero-base analysis is the request for only 16 new positions in FY 1980, although a further 23 positions in the base are proposed for redirection to carry out program improvements proposed in this budget. In FY 1979, 45 positions were reapplied similarly. As a result of the base resource applications approved by the Congress for FY 1979 and proposed for FY 1980, the Institution has been able to make better use of existing funds and positions, thereby holding to a minimum the request for additional resources. In the construction appropriations, all items were subjected to a total zero-base analysis as has been the case in past years.

The FY 1980 budget has been developed around the major program emphasis of promoting the care and maintenance of the collections and providing for improvements to the physical plant. There also are provisions for strengthening certain administrative components, research and buildings services functions.

As a result of the emphasis on promoting the care and maintenance of the collections, resources (both in the base and proposed additional positions and funds) will be used for urgent inventory efforts in some museums and for continued collections management work, including the receipt, accessioning, documentation and care of specimens and objects, throughout the Institution. In FY 1980, the Smithsonian also is requesting funds for the construction of the Museum Support Center, for which planning funds of $900,000 were provided in FY 1978 and FY 1979. In addition to providing suitable space for the collections to be housed there, the Center will promote research, conservation, and conservation training and will restore a significant amount of Mall space to public use.

Improvements to the physical plant recommended in this budget are both of a short and long-term nature. Funds are sought for continued programs of construction at the National Zoological Park according to its Master Plan, and for improvements. restoration and renovation to buildings throughout the Institution. Furthermore, planning funds are requested for a project

that will meet a variety of the Smithsonian's needs in a comprehensive and coherent manner for years to come. The project envisions development in the South Quadrangle to provide additional exhibition and other space for the Freer Gallery of Art, to accommodate a new center for the exhibition and study of Oriental Art, to offer a more appropriate site for the Museum of African Art, to meet the Institution's needs for space for rare books and for its central library, and to provide space for underground administrative, support, and parking requirements.

The Five-Year Prospective FY 1980-FY 1984, approved by the Board of Regents at the January 22, 1979 meeting and provided to the Congress, outlines the Smithsonian's operational and facilities plans for that period. The FY 1980 appropriation request is the first step in implementing the plans outlined in that document.

For FY 1980, the Institution is requesting the following appropriations:

(Dollars in thousands)

	FY 1979 Appropriation	FY 1979 Base Supplemental Requirements	FY 1979 Permanent Base Reduction/1	FY 1980 Requested Increase	FY 1980 Estimate
Salaries & Expenses	$96,302	$3,945	-$1,020	$5,513	$104,740
Science Information Exchange	($2,000)/2	($84)/2	--	--	--
Special Foreign Currency Program	3,700	--	--	4,000	7,700
Construction & Improvements, National Zoological Park	3,900	--	--	2,650	6,550
Restoration & Renovation of Buildings	2,100	300	--	2,500	4,900
Construction:					
Museum Support Center	575/3	--	--	20,025	20,600
South Quadrangle	--	--	--	500	500
Totals /2	$106,577	$4,245	-$1,020	$35,188	$144,990

/1 Reduction is a result of the decision by the Board of Regents to fund certain programs, previously financed with Federal appropriations, with non-appropriated Trust funds.

/2 The Science Information Exchange will be transferred to the Department of Commerce; accordingly, the Smithsonian is not seeking an appropriation for the Exchange for FY 1980. The FY 1979 appropriation and requested supplemental therefore are not added to the totals for comparability purposes between FY 1979 and FY 1980.

/3 The FY 1979 amount was appropriated for planning, following an appropriation of $325,000 the previous year.

I. Salaries and Expenses

FY 1978 Appropriation	FY 1979 Base	FY 1980 Estimate
$93,393,000	$99,227,000	$104,740,000

This appropriation will promote increased attention to the urgent inventory programs of several museums as well as to the continuing collections management efforts throughout the Institution. It also will permit the continued strengthening of management and support functions, and will encourage original research. The normal operation of programs such as those in the museums, galleries, zoological park, research laboratories and other units; special programs that have an impact throughout the Institution, notably the Research Awards Program; and the support activities will be sustained. The funding is allocated by activities as follows: (organizational allocation appears on pages A-2 and A-3)

	FY 1979 Base	Requested Increase	FY 1980 Estimate
Science	$37,053,000	$1,720,000	$38,773,000
History and Art	16,502,000	992,000	17,494,000
Public Service	2,201,000	22,000	2,223,000
Museum Programs	7,853,000	434,000	8,287,000
Special Programs	2,098,000	189,000	2,287,000
Administration	7,191,000	533,000	7,724,000
Support Programs	26,329,000	1,623,000	27,952,000
TOTALS	$99,227,000	$5,513,000	$104,740,000

The requested increase of $5,513,000 consists of program increases of $3,026,000 and uncontrollable increases in the amount of $2,487,000. An additional amount of approximately $400,000 in base resources has been recommended for redirection from lower to higher priority programs. Thus, a total of $3,400,000 in program changes is proposed in this budget. As a result of the zero-base analysis, both increases and decreases are recommended for several organizational units, resulting in net program changes. These are detailed in a summary sheet which appears before each activity.

II. Special Foreign Currency Program

1978 Appropriation	1979 Appropriation	1980 Estimate
$4,000,000	$3,700,000	$7,700,000

This appropriation will allow the Smithsonian to continue a program of grants in those countries where "excess" local currencies are available. Research will be performed in the following areas of Smithsonian Institution interest and competence: archeology and related disciplines, systematic and environmental biology, astrophysics and earth sciences, and museum programs. The Foreign Currency Program awards to Smithsonian employees, limited to a total of $500,000, are executed as normal Federal allotments to the individual bureaus of the Institution for the support of approved employee research projects. Such funds are expended following all appropriate Federal personnel and procurement regulations. The balance of the funds are awarded to applicants whose projects are selected by a panel of reviewers. The appropriation request also includes $4,000,000 equivalent in Pakistani rupees for a U.S. contribution to the international effort to save the ancient urban site of Moenjodaro located in present day Pakistan.

III. Facilities Planning, Renovation, Restoration and Construction

1978 Appropriation	1979 Appropriation	1980 Estimate
$5,250,000	$6,575,000	$32,550,000

Construction and Improvements, National Zoological Park. ($6,550,000) - Construction will continue at the Zoo following its Master Plan. In FY 1980, continued improvements to the central area are scheduled including renovation of the Small Mammal and Reptile Houses, the design of the Aquatic Habitats Exhibit and the design of the parking facility. Necessary restoration and renovation work at the Rock Creek Zoo and the Front Royal Conservation Center, such as road resurfacing and grounds improvements, will continue.

Restoration and Renovation of Buildings. ($4,900,000) - The FY 1980 appropriation will be used for continued funding of phased projects including better mobility and access to museum facilities for disabled persons and correction of hazardous conditions; installation of fire detection and suppression systems; facade and roof repairs; design, replacement and repairs to the heating, ventilating and air conditioning systems in several museum buildings; renovation of space to provide additional storage areas for the Smithsonian Institution Libraries in the Natural History Building; site development at the Smithsonian's Astrophysical Observatory at Mt. Hopkins, Arizona; library expansion at the Tropical Research Institute; and other necessary general repairs and improvements for building preservation and safety purposes.

Construction: Museum Support Center. ($20,600,000) - Funds are requested for FY 1980 to begin construction of the Museum Support Center. The Center will provide additional space for the care, documentation, conservation, preparation and study of the National Collections and for increased activity in conservation research and training.

Construction: South Quadrangle Planning. ($500,000) - Funds are requested for architectural engineering, planning and design of proposed facilities in the South Quadrangle: bounded by the Smithsonian Building, the Freer Gallery of Art, the Arts and Industries Building and Independence Avenue. The proposed facilities will house a new center for exhibition and study of Oriental art, the Museum of African Art, rare book and other central library needs, and underground administrative support and parking requirements.

Non-appropriated Funds

This budget is presented to explain the use of non-appropriated funds, as well as appropriated funds, for each Smithsonian bureau that receives a Federal appropriation. Information on the sources and application of all Smithsonian operating funds is detailed under Tab D in this budget request.

In addition to the Federal appropriations, the Institution has two major sources of non-appropriated funding. These are the Smithsonian Trust funds and the Federal grants and contracts.

The Trust funds are composed of restricted and unrestricted categories of funds. Unrestricted Trust funds (general and special purpose) are made available for the Institution's use from a variety of sources. These sources include interest on the Smithson bequest, income from other endowment and current fund investments, concessions such as food services and parking royalties from sales of Smithsonian products based on designs and objects in the collections, the Resident and National Associates' programs (including Smithsonian magazine), and the museum shops. They also include unrestricted gifts or bequests of funds. Restricted Trust funds consist of gifts, grants, endowment and other income designated for specific projects and purpose by the donor. The Freer fund is the largest example in this category, being strictly controlled under the terms of the original gift and bequest for the sole use of the Gallery.

The other major source of non-appropriated funding, Federal grants and contracts, comes from governmental agencies and departments. These funds are made available to the Smithsonian to support specific types of research, educational or other projects which the Smithsonian can undertake as a result of its expertise or its ability to respond quickly to certain kinds of needs.

There are three major purposes to which the unrestricted Trust funds are applied. First, the expenses of the auxiliary activities, such as the Associates programs, the Smithsonian magazine, and the museum shops are funded from the earned income of these activities. Secondly, management and administrative service units of the Institution, including legal counsel, accounting, personnel, supply and others receive Trust fund allotments as a result of the overhead recovery on grants and contracts administered by the Smithsonian and from administrative fees charged to Trust funded activities. Finally, a variety of allocations for important needs have been made with the approval of the Board of Regents.

This last category has taken on an increasing significance over the last couple of years as it has the effect of reducing Federal resource requirements. In FY 1978 the Regents approved a special annual allocation of $2,000,000 to be used for acquisitions for the collections and scholarly and educational programs. Of this, $1,000,000 is available annually among the six history and art museums for purchase of objects of outstanding importance to the collections. By explicitly limiting such Trust fund acquisitions to major objects that would otherwise be unaffordable, this program is clearly distinguishable from Federal acquisitions programs which will continue to be essential for the purchase of larger numbers of less costly items. An additional amount of $500,000 is designated for scholarly projects that do not lend themselves to or are not appropriate for direct Federal funding. These include unanticipated research opportunities that might arise suddenly (meteorite falls, for example), multidisciplinary research projects that can be carried out within and/or between bureaus, and projects that have been awarded external funds, such as those from the National Institutes of Health or the Ford Foundation. These projects can benefit greatly from matching Trust funds. The remaining $500,000 of the $2,000,000 figure is allocated to implement a wide range of public service programs that will be of benefit to the public. This program will give primary consideration to innovative projects that are designed to reach large segments of the public as well as educational projects.

Beginning in this fiscal year, the Board of Regents has approved using an additional $1,020,000 of the Institution's unrestricted Trust funds for certain programs previously financed with appropriated funds. These are the Smithsonian's Visiting Research (Fellowship) Program ($435,000), and the Fellowship and Visiting Scholars Programs of the Smithsonian Astrophysical Observatory and the Radiation Biology Laboratory ($191,000). Also, appropriated funds will be replaced with non-appropriated, unrestricted Trust funds (provided through the budget of various auxiliary activities located principally in Mall buildings and from the overhead budget of the administrative activities located at L'Enfant Plaza) to pay for an appropriate share of the rental space at L'Enfant Plaza and at the Service Center at 1111 North Capitol Street ($394,000).

After the three categories of operating expenses financed with unrestricted Trust funds are met, any remaining unrestricted income is designated for three purposes. Funds are transferred to the museums and galleries in recognition of their assistance in the planning and carrying out of museum shop, product development, and concession programs. These funds, amounting to only a few hundred thousand dollars each year, are used for the general operations of the receiving bureaus. (In addition, certain of the bureaus have their own income-producing activities; the theatre at the National Air and Space Museum is an example of this.) A second designation is for occasional improvements to the physical plant. Finally, funds permitting, the Institution makes an annual transfer to its relatively small endowment for the purpose of providing income for the rising costs in future years for program purposes.

TAB A

SALARIES AND EXPENSES

SMITHSONIAN INSTITUTION

SALARIES AND EXPENSES

Summary of Increase FY 1980

Appropriation, FY 1979		$ 96,302
Pay Supplemental Base Requirement	$3,595	
Less: Substitution of Trust for Federally funded Program (permanent reduction)	1,020	
		2,575
Proposed Program Supplemental (Museum of African Art)		350
Base, FY 1979		$ 99,227
FY 1980 Request		104,740
Requested Increase		$ 5,513

SMITHSONIAN INSTITUTION
"Salaries and Expenses"
Summary of 1978 Appropriation and the 1979 and 1980 Estimates

(Dollars in thousands)

Page No.	Unit	1978 Actual Pos.	1978 Actual Amount	1979 Estimate Pos.	1979 Estimate Amount	1979 Estimate Supplementals/ Offsetting Reductions/1	1979 Estimate Total	1979 Base Base Restoration/2	1979 Base Total	1980 Estimate Pos.	1980 Estimate Amount	Analysis of Change Pos.	Analysis of Change Uncontrollable	Analysis of Change Program
	Science													
A-9	Assistant Secretary for Science	7	285	7	290	8	298	-	298	7	302	-	4	-
A-11	National Museum of Natural History	498	12,447	503	12,810	557	13,367	27	13,394	506	14,266	3	276	596
A-15	Astrophysical Observatory	73	4,613	73	4,838	-54	4,784	6	4,790	73	4,881	-	54	37
A-21	Tropical Research Institute	65	1,743	67	1,736	65	1,801	1	1,802	72	2,257	5	38	417
A-25	Radiation Biology Laboratory	48	1,721	48	1,740	15	1,755	4	1,759	49	1,807	1	23	25
A-29	National Air & Space Museum	230	5,777	229	5,579	162	5,741	44	5,785	227	5,791	-2	103	-97
A-32	Chesapeake Bay Center	21	626	22	663	29	692	-	692	21	706	-1	14	-
A-37	National Zoological Park	325	7,584	324	7,628	316	7,944	10	7,954	324	8,177	-	158	65
A-41	Center for the Study of Man	15	843	7	564	10	574	5	579	7	586	-	7	-
	Subtotal, Science	1,282	35,639	1,280	35,848	1,108	36,956	97	37,053	1,286	38,773	6	677	1,043
	History and Art													
A-45	Ass't Secretary for History and Art	8	243	9	274	14	288	-	288	9	303	-	9	6
A-47	Museum of History and Technology	274	6,405	274	6,384	299	6,683	19	6,702	278	6,984	4	126	156
A-50	National Collection of Fine Arts	106	2,928	106	2,986	112	3,098	10	3,108	105	3,210	-1	58	44
A-54	National Portrait Gallery	75	2,128	78	2,209	80	2,289	12	2,301	76	2,345	-2	44	-
A-58	Hirshhorn Museum & Sculpture Garden	83	2,034	80	2,047	69	2,116	5	2,121	80	2,184	-	39	24
A-61	Freer Gallery of Art	30	576	30	585	18	603	8	611	29	626	-1	15	-
A-64	Archives of American Art	17	458	17	457	16	473	2	475	17	519	-	10	34
A-67	Cooper-Hewitt Museum	19	349	20	532	11	543	3	546	21	623	1	12	65
A-71	Museum of African Art	-	-	30/3	-	350	350	-	350	30	700	-	-	350
	Subtotal, History & Art	612	15,121	644	15,474	969	16,443	59	16,502	645	17,494	1	313	679
	Public Service													
A-75	Ass't Secretary for Public Service	10	226	9	231	9	240	1	241	9	257	-	4	12
A-77	Anacostia Neighborhood Museum	19	557	19	622	17	639	7	646	19	631	-	10	- 25
A-79	International Exchange Service	8	235	5	212	4	216	-	216	5	217	-	1	-
A-81	Division of Performing Arts	9	299	9	312	8	320	2	322	9	327	-	5	-
A-83	Smithsonian Institution Press	28	717	28	741	28	769	7	776	28	791	-	15	-
	Subtotal, Public Service	74	2,034	70	2,118	66	2,184	17	2,201	70	2,223	-	35	-13

(Dollars in thousands)

Page No.	Unit	1978 Actual Pos.	1978 Actual Amount	1979 Estimate Pos.	1979 Estimate Amount	1979 Estimate Supplementals/ Offsetting Reductions /1	1979 Estimate Total	1979 Base Base Restoration/2	1979 Base Total	1980 Estimate Pos.	1980 Estimate Amount	Analysis of Change Pos.	Analysis of Change Uncontrollable	Analysis of Change Program
	Museum Programs													
A-86	Ass't Secretary for Museum Programs	97	1,916	96	2,029	89	2,118	6	2,124	93	2,336	-3	47	165
A-91	Office of the Registrar	4	100	4	104	5	109	-	109	4	110	-	1	-
A-93	Conservation Analytical Laboratory	23	510	23	695	24	719	1	720	23	764	-	13	31
A-96	Smithsonian Institution Libraries	97	2,204	95	2,373	82	2,455	9	2,464	96	2,594	1	48	82
A-99	Office of Exhibits Central	50	1,141	47	1,128	53	1,181	2	1,183	47	1,199	-	16	-
A-101	Traveling Exhibition Service	6	154	6	142	6	148	-	148	6	152	-	4	-
A-104	Smithsonian Archives	13	303	13	293	14	307	1	308	13	334	-	6	20
A-106	National Museum Act	3	793	3	794	3	797	-	797	3	798	-	1	-
	Subtotal, Museum Programs	293	7,121	287	7,558	276	7,834	19	7,853	285	8,287	-2	136	298
	Special Programs													
A-110	American and Folklife Programs	4	276	4	350	9	359	1	360	4	461	-	1	100
A-114	International Environmental Science	2	367	2	383	11	394	-	394	2	397	-	3	-
A-116	Academic and Educational Programs	18	868	19	863	-416	447	-	447	19	472	-	9	16
A-120	Research Awards Program	-	103	-	390	7	397	-	397	-	457	-	-	60
A-123	Collections Management/Inventory	-	-	-	500	-	500	-	500	-	500	-	-	-
	Subtotal, Special Programs	24	1,614	25	2,486	-389	2,097	1	2,098	25	2,287	-	13	176
A-125	Administration	236	6,049	242	6,899	271	7,170	21	7,191	252	7,724	10	150	383
	Support													
A-131	Printing and Photographic Services	39	998	39	947	35	982	3	985	41	1,066	2	16	65
A-133	Office of Protection Services	546	8,677	549	8,911	400	9,311	28	9,339	549	9,695	-	211	145
A-136	Office of Plant Services	322	16,028	322	16,061	-70	15,991	14	16,005	321	17,191	-1	936	250
	Subtotal, Support	907	25,703	910	25,919	365	26,284	45	26,329	911	27,952	1	1,163	460
	TOTAL	3,428	93,281	3,458/3	96,302	2,666	98,968	259	99,227	3,474	104,740	16	2,487	3,026

/1 The base requirement for FY 1979 is $3,945,000, consisting of an amount of $3,595,000 for FY 1979 legislated and Wage pay raises and an FY 1979 program supplemental of $350,000 for the Museum of African Art. This amount is offset by reductions of: (a) $1,020,000 (permanent) related to the decision by the Board of Regents to fund certain programs, previously financed with Federal appropriations, with non-appropriated Trust funds; (b) $244,000 (one-time savings) related to the FY 1979 hiring limitation; and (c) $15,000 (one-time savings) related to the administrative travel cut.

/2 Restores one-time FY 1979 reductions of $244,000 related to the hiring limitation and $15,000 related to the administrative travel cut.

/3 Thirty (30) positions associated with the Museum of African Art FY 1979 program supplemental of $350,000.

SMITHSONIAN INSTITUTION
FY 1980 UNCONTROLLABLE INCREASES

Additional funds are sought to finance costs that are beyond the control of the Institution. These increases result from law, prevailing practice of wage setting, changes in utilities, postage and communications costs, and the cost associated with the two additional workdays which will occur in FY 1980. A total of $2,487,000 is required for these uncontrollable increases:

Necessary Pay and Related Benefits...	$1,687,000
Utility Rate Increases.....	669,000
Postage Rate Increase.....	50,000
Telephone Rate Increase.....	50,000
Fuel Oil Rate Increase.....	31,000
	$2,487,000

NECESSARY PAY AND RELATED BENEFITS - An amount of $1,687,000 is required for personnel compensation and benefits for the projected higher costs in FY 1980 of FY 1979 staff. These increases accrue to employees as a result of within-grade step increases, legislated pay raises, and the two additional workdays which will occur in FY 1980. Costs are calculated on a position-by-position analysis taking into consideration approved new hires in the current year, savings from turnover and filling of vacancies at lower grades when possible. Absorption of these costs from currently available funds seriously impairs approved program activity. First, for every $16,000 that must be applied to these costs from funds already in salaries and benefits, approximately one staff-year of approved employment is lost. Second, if other object class funds must be applied to these costs, employees are left without the supplies, tools and equipment they need to perform their jobs as well as possible. The additional personnel costs are attributable to the following externally imposed factors:

(1) Within-grade Step Increases - Necessary pay funding of $1,036,000 is required in FY 1980 for within-grade step increases. For General Schedule employees, such increases are required by 5 U.S.C. 5335. Wage employees are covered by law and prevailing practice. Such increases must be granted if employees are performing at acceptable levels of competence. In any one fiscal year, the costs of within-grade increases are substantial. These increases include the part-year cost of new actions in the current year as well as the cost of annualizing step increases granted in the prior fiscal year.

The General Schedule portion of this request amounts to $841,000. There are approximately 2,600 General Schedule employees of whom approximately 1,500 are scheduled to receive new within-grade increases. The Wage portion amounts to $195,000. There are approximately 900 Wage positions of whom approximately 400 are scheduled to receive new within-grade increases. It is anticipated that the amount requested for the General Schedule employees will not be affected by the Merit Pay provisions of the new Civil Service Reform Act.

(2) Annualization of Legislated Pay Raises - Funds in the amount of $135,000 are requested to annualize the General Schedule and Wage pay increases effected in FY 1979.

In accordance with P.L. 91-656, General Schedule salary scales are adjusted each October to make them comparable to rates paid for similar work in private industry. The total annual cost of the raise that went into effect October 8, 1978 is estimated to be $2,906,000. A supplemental appropriation of $1,840,000 is being sought in FY 1979. (The supplemental appropriation sought for FY 1979 reflects one-time absorptions totalling $983,000; the full base requirement would amount to $2,823,000.) The balance of $83,000 is requested in FY 1980 to provide full-year funding.

Wage raises are granted under the authority of 5 U.S.C. 5341. Prevailing practices call for Wage pay scales to be reviewed by a Wage Finding Authority in each geographic area. In the Washington area, this has resulted in Wage employees receiving a pay raise in October of each year. Smithsonian Wage employees in Panama, Maryland, Virginia, Arizona, and New York receive similar wage hikes at other times. The Washington area personnel received a pay raise of 5.5 percent in October, 1978. Raises in other geographic areas have been estimated on the same basis. The total annual cost of these raises is estimated to be $824,000. A supplemental of $476,000 is being sought in FY 1979. (The supplemental appropriation sought for FY 1979 reflects one-time absorptions totalling $296,000; the full base requirement would amount to $772,000.) The balance of $52,000 is requested in FY 1980 to provide full-year funding.

(3) Two Additional Workdays - The annual rates of pay, as well as resources currently available for compensation to employees, are based on employees being paid for a normal work year containing 260 days. FY 1980, however, will contain 262 workdays, two more than in FY 1979. Additional funding of $516,000 is required to finance employees' salaries and benefits for these two additional workdays.

The distribution of the requested FY 1979 pay supplemental appropriation totalling $2,316,000 is distributed by organizational unit on pages A-2 and A-3. A requested program supplemental of $350,000 for the Museum of African Art is also shown, on page A-2. Necessary pay in the amount of $1,687,000 is distributed by organizational unit and purpose on page A-7.

Utility, Mail, Telephone and Fuel Oil Increases - Presently a base of $7,815,000 is available to fund the costs of heating steam, electricity, gas, telephones, mail and fuel oil. An additional amount of $800,000 is sought in FY 1980 to cover the projected increased cost of these items. The following table depicts actual use, rates and cost of heating steam, electricity and gas for FY 1977 and FY 1978 and the estimated cost of these utilities for FY 1979 and FY 1980.

Analysis of Utilities Costs
Office of Plant Services

	Heating Steam			Electricity		
	Use	Unit Cost	Cost	Use	Unit Cost	Cost
Fiscal Year	Millions of lbs.	Average $ Per 1000 lbs.	$1,000's	Millions of KWH	Average $ Per KWH	$1,000's
1977 Actual	273.3	6.88	1,880	87.6/1	0.0404	3,543
1978 Actual	286.8	7.69	2,205	85.9	0.0425	3,654
1979 Est.	287.0	8.59	2,465	85.9/2	0.0449	3,855
1980 Est.	287.0	8.59	2,465	86.0	0.0458	3,935
1980 Est.			2,465			3,935
1978 Base			2,205			3,654
	Base Shortage, Heating Steam		260	Base Shortage, Electricity		281

/1 Reflects increase in consumption due to centralization under Office of Plant Services of of utility accounts from off-Mall units.

/2 Reflects additional consumption associated with several new exhibits facilities in Beaver Valley at the Zoo. This increase is offset by savings in consumption resulting from the installation of additional computerzied power management systems.

	Gas		
	Use	Unit Cost	Cost
Fiscal Year	Millions of cu. ft.	Average $ Per cu. ft.	$1,000's
1977 Actual	.996	.2379	237
1978 Actual	1.019	.2914	297
1979 Est.	1.132	.3480	394
1980 Est.	1.150	.3696	425
1980 Est.			425
1978 Base			297
	Base Shortage, Gas		128

The additional $131,000 is needed to cover projected increased costs associated with telephones ($50,000), mail ($50,000) and fuel oil ($31,000). Presently, $1,659,000 of total base resources is available to fund these items.

The estimates for FY 1979 and FY 1980 are based upon past usage data, historical weather patterns, current and planned use of space in buildings, available information on rates from utilities companies, and increases that have resulted from or use considered likely as a result of the national and international energy situation. Changes in any of these factors can have a significant impact on the accuracy of these projections and add to the substantial uncertainty that exists in this fluid and unpredictable area of budgeting. However, the percentage of utilities increases for recent years would indicate that estimates for FY 1979 and FY 1980 are well within averages for increases experienced in this area of budgeting.

Necessary Pay
FY 1980

(Dollars in thousands)

Unit	Within Grades	Annualization of Raises GS	Annualization of Raises Wage	Two Extra Work Days	Total
Assistant Secretary for Science	2	1	-	1	4
National Museum of Natural History	170	16	1	89	276
Smithsonian Astrophysical Observatory	24	3	7	20	54
Smithsonian Tropical Research Institute	23	3	2	10	38
Radiation Biology Laboratory	13	1	1	8	23
Chesapeake Bay Center	8	1	1	4	14
National Air and Space Museum	65	7	2	29	103
National Zoological Park	87	4	17	50	158
Center for the Study of Man	5	-	-	2	7
Assistant Secretary for History and Art	5	2	-	2	9
Museum of History and Technology	77	6	1	42	126
National Collection of Fine Arts	39	2	-	17	58
National Portrait Gallery	30	2	-	12	44
Hirshhorn Museum and Sculpture Garden	26	1	1	11	39
Freer Gallery of Art	9	1	1	4	15
Archives of American Art	7	-	-	3	10
Cooper-Hewitt Museum	5	-	4	3	12
Assistant Secretary for Public Service	3	-	-	1	4
Anacostia Neighborhood Museum	6	1	-	3	10
International Exchange Service	1	-	-	-	1
Division of Performing Arts	4	-	-	1	5
Smithsonian Institution Press	8	2	-	5	15
Assistant Secretary for Museum Programs	33	2	-	12	47
Office of the Registrar	1	-	-	-	1
Conservation-Analytical Laboratory	11	2	-	-	13
Smithsonian Institution Libraries	34	1	-	13	48
Office of Exhibits Central	7	1	-	8	16
Smithsonian Traveling Exhibition Service	3	-	-	1	4
Smithsonian Archives	4	2	-	-	6
National Museum Act	1	-	-	-	1
American Studies and Folklife Programs	1	-	-	-	1
International Environmental Science Program	2	-	-	1	3
Academic and Educational Programs	6	-	-	3	9
Administration	96	7	-	47	150
Printing and Photographic Services	9	2	-	5	16
Office of Protection Services	139	9	1	62	211
Office of Plant Services	72	4	13	47	136
Total	1,036	83	52	516	1,687

SCIENCE

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	1,282	35,639	92	2,278	29	1,434	5	849	215	10,605
FY 1979 Base	1,280	37,053	91	2,525	28	1,479	12	1,088	217	11,704
FY 1980 Estimate	1,286	38,773	78	2,578	28	1,448	8	1,130	196	11,405

*FTP = Full-time permanent positions

Analysis of Change (Federal Request)

Necessary Pay..... 677
Program Funds..... 1,043

The FY 1979 base for all units in the Science Activity totals 1,280 positions and $37,053,000. A net program increase of six positions and $1,043,000 is sought for FY 1980, consisting of program increases of 17 positions and $1,241,000, offset by reductions of 11 positions and $198,000. An amount of $677,000 is required for necessary pay.

The major portion of the proposed program increase, an amount of $609,000, is required for collections management work at the National Museum of Natural History, including continuing inventories and collections storage equipment. This is an Institutional priority for FY 1980. An additional amount of $377,000 is needed for the Smithsonian Tropical Research Institute for conservation and education programs and administrative requirements stemming from the Panama Canal Treaty and related agreements. Funds of $118,000 are sought for research and support of research at the Smithsonian Astrophysical Observatory, the National Museum of Natural History, and the Radiation Biology Laboratory. (An additional amount of $30,000 is being redirected for research support purposes at the Chesapeake Bay Center for Environmental Studies.) Finally, an amount of $137,000 is required for essential supplies and equipment for the new facilities at the National Zoological Park; urgently needed maintenance services at the Smithsonian Tropical Research Institute; and the strengthening of financial administration at the Smithsonian Astrophysical Observatory.

The requested increase in funds is offset by reductions of $198,000 in base resources in exhibitions, education and training programs and in certain specific research areas. In addition to these reductions, in FY 1979, an amount of $191,000 is being deducted from the permanent base of the Smithsonian Astrophysical Observatory ($160,000) and the Radiation Biology Laboratory ($31,000) as a result of the decision by the Board of Regents to finance the Fellowship and Visiting Scholars Programs of these bureaus with non-appropriated Trust funds. These programs were funded previously with Federal appropriations.

The sources and uses of non-appropriated Trust funds are explained individually for each line-item in the Science Activity.

OFFICE OF THE ASSISTANT SECRETARY FOR SCIENCE

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	7	285	-	73	-	-	-	34	7	418
FY 1979 Base	7	298	-	47	-	-	-	60	2	200
FY 1980 Estimate	7	302	-	17	-	-	1	53	2	200

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	7	0	7
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	181	4	185
12 Personnel Benefits.....	18		18
21 Travel & Trans. of Persons....	15		15
23 Rent, Comm. & Utilities.....	4		4
25 Other Services.....	75		75
26 Supplies and Materials.....	5		5
TOTAL	298	4	302

Analysis of Change

Necessary Pay.....	4
Program Funds.....	0

ABSTRACT - This office is responsible for overall planning, coordinating, and reviewing of the progress of the 13 science bureaus and programs within the Institution. No program increase is requested for FY 1980. Necessary pay in the amount of $4,000 is required for existing staff.

PROGRAM - The Office of the Assistant Secretary for Science advises and assists the Secretary in planning, implementing and reviewing the progress of Smithsonian science programs. The bureaus and other activities reporting to the Assistant Secretary for Science are the National Museum of Natural History, the National Museum of Man, the Astrophysical Observatory, the Tropical Research Institute, the Radiation Biology Laboratory, the Chesapeake Bay Center for Environmental Studies, the National Air and Space Museum, the National Zoological Park, the Center for the Study of Man, the Office of Fellowships and Grants, the Office of Biological Conservation, the Fort Pierce Bureau, and the International Environmental Science Program. Additionally, this office provides the Institution's liaison with national and international science organizations, and representation on national

and international science boards and commissions.

Office of Biological Conservation - The Office of Biological Conservation was established by the Smithsonian at the beginning of FY 1979. This central office, composed of two current staff members, will be responsible for coordinating the Institution's activities in conservation and for developing a program which will assist public understanding of the conditions in our changing environment. Among its concerns will be the status of current national and international efforts devoted to conserving plant and animal species. This includes keeping abreast of the educational and legislative programs associated with these efforts. The office also functions as a liaison to various governmental and non-governmental organizations in the United States and abroad.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds contribute to the support of international environmental research centers where the Smithsonian participates as a sponsor or member of a consortium. The FY 1980 funding level reflects the proposed termination of funding for the Darwin Foundation in the Galapagos Islands (projected FY 1979 expenditures of $30,000) which was funded for three years beginning in FY 1977.

Restricted Funds--Funds have been provided from the World Wildlife Fund for the specific support of an ecological project in Nepal relating to the study and conservation of the tiger and its habitat. A foundation grant is anticipated to continue the project in FY 1980.

Federal Grants and Contracts--Funds are provided by various Federal agencies interested in using the expertise of the Smithsonian. A grant from the Peace Corps ($248,000) for the training, support and placement of environment volunteers was terminated at the end of FY 1978. Continuing contracts and grants include a contract with the Office of Naval Research to conduct long-term studies in the area of manpower research and development, and a grant from the National Science Foundation to support a program for distinguished scientists to come to the Institution to debate before a public audience significant scientific issues such as DNA research, climate control and desertification. These debates are taped for transmission over public radio. The transcripts will be put in book form for later dissemination to a broader audience.

NATIONAL MUSEUM OF NATURAL HISTORY

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	498	12,447	3	125	2	282	3	474	31	1,011
FY 1979 Base	503	13,394	1	34	1	126	3	384	39	1,015
FY 1980 Estimate	506	14,266	-	10	1	146	2	374	49	1,155

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	503	3	506
Number of Other Positions.....	27	19	46
11 Personnel Compensation.....	10,944	472	11,416
12 Personnel Benefits.....	1,019	45	1,064
21 Travel & Trans. of Persons....	130		130
22 Transportation of Things.....	22		22
23 Rent, Comm. & Utilities.....	13		13
24 Printing and Reproduction.....	110		110
25 Other Services.....	747	32	779
26 Supplies and Materials.....	351	21	372
31 Equipment.....	58	302	360
TOTAL	13,394	872	14,266

Analysis of Change

Necessary Pay.....	276
Program Funds.....	596

ABSTRACT - The National Museum of Natural History (NMNH) serves as a major world center for the natural sciences. It maintains large reference collections and conducts programs of identification and documentation, research, collections management, exhibits and education, including collaborative projects with universities and other institutions of learning. For FY 1980, a net program increase of three positions and $596,000 is requested. This change is proposed as follows: (1) three new positions and a total of $609,000 for collections management efforts to support the upcoming move to the Museum Support Center, including three positions and an amount of $359,000 to further work already underway on collections inventory and control, and an amount of $250,000 to purchase drawers for storage of the collections to be moved to the Support Center; (2) three additional positions and $50,000 to augment critical needs of scientific research support; and (3) a reduction of three positions and $63,000 is proposed in exhibitions and education programs to offset these increases. Necessary pay in the amount $276,000 is required for existing staff.

PROGRAM - This Museum maintains the largest scientific reference collections in the nation (over 60 million objects) and has the legal responsibility (20 U.S.C. 59) to serve as the ultimate repository of all collections of objects of natural history, archeology and ethnology given by agencies of the government when no longer needed for investigations in progress. Additionally, the NMNH is the repository for numerous extremely valuable collections obtained from the scientific community, academic institutions and many individuals.

The scientists at the Museum conduct a broad program of basic research on man, plants, animals, fossil organisms, rocks, minerals, sediments and materials from outer space. Their fundamental studies in biology are providing new information required for the solution of major problems of conservation, pollution and food production, for improvement of medical knowledge, and for planning national and international programs leading to predictive ecological and environmental management. The scientific and technical results which flow from this research are made available to others by an active and large publications program, consultations with government agencies, and public lectures.

New funding in FY 1979 intensified the work of three museum research projects. The marine mammal program, which has as its objective the study of endangered species such as whales, has undertaken a project to determine the dietary habits of whales through analysis of their stomach contents. A second program collects, analyzes with computer assistance, and disseminates information on the amphipod, a small aquatic organism sensitive to environmental changes and therefore useful in monitoring environmental problems and fluctuations. A book dealing with freshwater amphipods of the world will be published in FY 1979. Another book dealing with marine amphipods is in progress and will be published in the near future. With the remaining funds appropriated for FY 1979 the insect sorting center was established. As part of this program, entomology students under the supervision of of their professors have been hired on a contractual basis to sort, identify and prepare for storage the insect collections to be used as a reference resource in ecological studies and surveys. A collection of insects from the Chesapeake Bay area is available already for study and a collection of Brazilian insects will be available soon.

The Oceanographic Sorting Center prepares and distributes animal and plant materials to scientists in 200 agencies around the world which are concerned with marine pollution, ocean dumping, pollution monitoring, environmental prediction and systematic studies. The Scientific Event Alert Network is responsible for providing timely notice of short-lived natural scientific phenomena and events, such as volcano activity, meteorite falls, earthquakes and whale strandings, to scientists and other concerned professionals within and outside of the Smithsonian.

The Handbook of North American Indians is a special project of the Museum which will produce a 20-volume encyclopedic treatment of the cultures, artifacts, territories and habits of Indians. Two volumes have been published already; the whole project should be completed within the next eight years. This project was transferred to NMNH from the Center for the Study of Man.

Five million people visited the Museum in FY 1978, including many thousands of school children attracted by the exhibits. A major program of exhibit improvement was begun in FY 1974 with the creation of two new exhibits: "Ice Age Mammals and the Emergence of Man" and the very successful "Discovery Room," an area in which young visitors may handle display items and specimens. In FY 1976, two additional major new exhibits were completed and opened to the public: the Museum's Bicentennial exhibit entitled "Our Changing Land," which depicts changes wrought by man and nature over the last 10,000 years in the Washington, D.C. area, and an exhibit on South America entitled "A Continent and Its Culture," which deals with the culture and environment of South America. In addition, the popular "Insect Zoo" was opened as a new exhibit, and a major effort to upgrade existing exhibitions was undertaken. In FY 1977, work was completed on the "Splendors of Nature" exhibit which displays many spectacular and beautiful natural objects as well as items made by primitive man, and in FY 1978 the new "Rise of Western Civilizations" Hall was opened. The "Dynamics of Evolution" Hall is scheduled to open for public viewing in May, 1979. Plans for FY 1980

call for renovation of two halls in the Paleobiology complex dealing with fossils and the history of life. Renovation of additional halls in this group is planned for future years.

As part of its education program, the Museum provides assistance for elementary and secondary school groups. In addition, many members of the scientific staff participate in joint educational programs with universities by teaching courses, training graduate students and conducting science seminars. The Museum also provides leadership in the improvement of museum techniques and collections management, especially through the application of computer technology. With the completion in mid-1976 of the Museum's West Court addition, housing the Education Learning Center and the Naturalist Center, major new educational resources were made available to the public. The Learning Center has four classrooms and an assembly area for the use of visiting groups of students. The Naturalist Center features representative collections from many groups of organisms as well as rocks, minerals, and anthropological materials. The resources of the Center, including the collections and the library, are available to all amateur naturalists.

EXPLANATION OF PROGRAM CHANGE - An increase of three positions and $50,000 is requested for research support to provide funds for three laboratory technicians ($34,500) and for the purchase of equipment and supplies ($15,500). These positions and funds will help to support properly the research conducted in the Museum in order to obtain the maximum potential benefit from the programs. These funds are necessary so that the scientists can concentrate fully on their research, leaving the preparation and support work to skilled technicians. This support for scientific research is so important to the Museum that it proposes to redirect three positions and $50,000 from the exhibits and education programs to offset these increases. An additional $13,000, related to the three redirected positions, can be deducted from these programs.

Collections management is the other major area of emphasis in this year's budget request. Almost $500,000 (including $300,000 of additional funds appropriated by the Congress in FY 1979 for collections inventory work) has already been applied towards the entire inventory of the Museum's collections which must be completed before the move to the Museum Support Center. The collections inventory funds received in FY 1979 are being used in support of nine major inventory projects, such as the ethnology and archeology collections in the anthropology department and the mollusk collections in the invertebrate zoology department. These nine collections were selected because of their value and vulnerability to theft (this is particularly true of certain anthropological and mineral specimens); their readiness to be inventoried; and their planned move to the new Support Center. These funds are also being used to support 14 pilot projects which will define the procedures which should be employed in full-scale inventory work on other collections in future years. These inventories will be completed in FY 1980 and beyond. Included will be such important collections as the fish, mammals, plants, insects, reptiles, amphibians and fossils, as well as many lesser collections. Special inventory funds also will support the automatic data processing office, which will be managing the entire program.

For FY 1980, three new positions and funding of $359,000 are requested to continue and accelerate the important inventory tasks.

Work on the department of anthropology collections will continue to receive the top priority. Approximately 90 percent of the holdings of this department will be moved to the new Support Center. It is anticipated that a total of about $650,000 will be required to inventory all of the anthropology collection, of which $141,000 is requested in FY 1980. This funding will provide nine temporary positions ($106,000) and support costs of $35,000 for purchase of equipment, supplies and computer time.

In FY 1979, work is proceeding in the paleobiology department to inventory the ancient and valuable Burgess shale and fossil fish collections. To complete this work an additional $30,000 is requested for FY 1980 to provide two temporary positions ($23,000) and support costs of $7,000 for equipment and supplies. Support is also needed for the automatic data processing office for three permanent positions ($51,000), so that the administrative and and management support which the inventory program will require can be provided.

In FY 1980, major efforts also will be directed towards work on the invertebrate zoology, vertebrate zoology and entomology collections. For invertebrate zoology a total of $50,000, including $38,000 for three temporary positions and support costs of $12,000 for supplies, equipment and computer time, will be needed to do the first half of the inventory of 1.3 million specimens. For vertebrate zoology a total of $37,000, including $21,000 for two temporary positions and support costs of $16,000 for supplies, equipment and computer time, is requested. These funds will provide for the entry of data for the first quarter of the department's holdings. The efforts in entomology will require $50,000, including $32,000 for three temporary positions and support costs of $18,000, which will be used to inventory insect collections of limited size and intense research use, such as the type-specimen and beetle collections.

Finally, a total of $250,000 is requested in FY 1980 to purchase drawers for the storage of collections to be moved into the Support Center. These drawers are the first item of equipment which will be used to hold the specimens taken out of crowded storage as the inventory progresses and they will be placed in cases or compactors at the new facility when it is finished.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds are derived from a variety of sources including the Museum's share of sales in the museum shop and cafeteria; from other receipts such as those realized from the sale of exhibit brochures, the By-word communications system, tuition grants from local universities, and product development activities; and from allotments. The funds are used to help finance new exhibit brochures, field research support, laboratory equipment and supplies, training for anthropology students, the anthropological archives, supplies for the conservation laboratory and special events for the opening of new exhibits.

Restricted Funds--Funds provided here are in the form of restricted endowment accounts which specify the use of the donation or bequest and of gifts provided by organizations or corporations for specific purposes. Generally, the funds provide support for a particular exhibit or project. Two of the largest restricted endowments come from the Hughes fund ($12,500 in estimated FY 1979 expenditures) for field research in old world archeology and the Mineral fund ($10,000 in estimated FY 1979 expenditures) for acquisitions of minerals and gems for the collections. Examples of two of the larger corporate gifts are the $30,000 provided by an anonymous donor for the anthropological research and $18,000 for the vertebrate zoology collection from the Strauss Memorial fund.

Federal Grants and Contracts--These funds are provided by various agencies and departments for special projects which can be conducted at the NMNH as a result of its particular expertise in the given area. Examples of Federal contract support are the medical entomology project funded by the U.S. Army ($31,000 projected for FY 1979) which conducts basic biosystematic research on the effects of arthropods, such as mosquitoes, of military medical significance overseas, and the tumor registry in lower animals project which facilitates the study of neoplasms and related disorders in invertebrate and cold blooded vertebrate animals by serving as a specimen depository, a diagnostic and information center, and a research group ($143,000 projected for FY 1979).

SMITHSONIAN ASTROPHYSICAL OBSERVATORY

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	73	4,613	70	1,856	-	40	-	130	155	8,254
FY 1979 Base	73	4,790	74	2,076	-	9	3	311	158	9,688
FY 1980 Estimate	73	4,881	74	2,115	-	4	3	355	127	9,432

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	73	0	73
Number of Other Positions.....	10	-2	8
11 Personnel Compensation.....	2,572	124	2,696
12 Personnel Benefits.....	252	12	264
21 Travel & Trans. of Persons....	50	5	55
22 Transportation of Things.....	39		39
23 Rent, Comm. & Utilities.....	303	-44	259
24 Printing and Reproduction.....	26		26
25 Other Services.....	1,080	-1	1,079
26 Supplies and Materials.....	250	-5	245
31 Equipment.....	218		218
TOTAL	4,790	91	4,881

Analysis of Change

Necessary Pay.....	54
Program Funds.....	37

ABSTRACT - The Smithsonian Astrophysical Observatory (SAO), established in 1890, has as its primary goal the increase and diffusion of knowledge about the earth and the universe through astrophysical studies. To accomplish this, SAO conducts a broad program of basic research in eight interrelated scientific fields: atomic and molecular physics, geoastronomy, high-energy astrophysics, planetary sciences, optical and infrared astronomy, radio astronomy, solar and stellar physics, and theoretical astrophysics. Use of both ground-based and space-borne instruments for data gathering, and the reduction and analysis of data as well as formulation of mathematical models of astrophysical systems using computers are essential to the conduct of SAO's research programs. For these purposes, SAO maintains a multi-purpose observing facility at Mt. Hopkins in Arizona and a number of

small observing stations around the world, participates in National Air and Space Administration (NASA) sponsored scientific space-borne experiments, and operates a relatively large computer at its headquarters in Cambridge, Massachusetts. Many SAO programs, particularly those involving space observations, are supported by contracts and grants from government agencies such as NASA; other programs are conducted in cooperation with state and private educational institutions.

For FY 1980, a net program increase of $37,000 is proposed. An increase of two positions and $63,000 is requested (1) to further the research capability of the Langley-Abbot Program which is concerned with the relationships between solar energy and the terrestrial environment (a solar physicist and $43,000); and (2) to strengthen the administration area (an accountant and $20,000). Decreases totalling two positions and $26,000 will be possible through the elimination of a clerical position, reduction in research support funds in one division and the use of a temporary in lieu of an authorized full-time permanent technician position assigned to the Multiple Mirror Telescope. In addition, a permanent base reduction of $160,000 was effected in FY 1979 as a result of the decision by the Board of Regents to use non-appropriated Trust funds to finance the Fellowship and Visiting Scholars Programs previously financed with appropriated funds. Necessary pay in the amount of $54,000 is required for existing staff.

PROGRAM - The Smithsonian Astrophysical Observatory's continued leadership in modern astronomy results in part from its diversified approach to research that encompasses many subdisciplines. The breadth and depth of the SAO program, with pioneering projects in several fields, has attracted a large and talented assembly of scientific and technical experts. In turn, this staff has created an atmosphere of innovation that both inspires the development of new research tools and encourages the rapid and effective response to promising avenues of investigation. Although research projects are grouped in eight divisions, all efforts are integrated in a comprehensive program so that the results in one division often complement those in another. Those divisions are:

1. Atomic and Molecular Physics--laboratory astrophysics, shock tube and ultraviolet vacuum spectroscopy; and atomic physics.

2. Geoastronomy--studies of the earth's motions; geodesy and geophysics; and celestial mechanics.

3. High-Energy Astrophysics--observations of high-energy sources emitting x-rays and/or gamma rays.

4. Optical and Infrared Astronomy--observations of infrared sources; stellar and planetary observations; and studies of stellar evolution.

5. Planetary Sciences--studies of structure and composition of planetary atmospheres; studies of asteroids; meteorites, cosmic dust, and comets; studies of lunar and other extraterrestrial materials; and studies pertaining to the evolution of the solar system.

6. Radio Astronomy--very long baseline interferometric observations of celestial radio sources and laboratory studies of interstellar molecules.

7. Solar and Stellar Physics--observational and theoretical studies of solar and stellar process; studies of solar activity; interrelationship of solar and terrestrial phenomena.

8. Theoretical Astrophysics--construction of model stellar atmospheres; investigation of massive and high-density stars; cosmology; studies of galactic evolution; physics of interstellar matter, relativistic astrophysics; and gravity-wave physics.

In support of these investigations, scientific data are obtained from laboratory experiments conducted primarily in SAO's Mt. Hopkins Observatory in Arizona--site of the Multiple Mirror Telescope (MMT); at SAO's worldwide network of small observing stations and other major observatories cooperating with SAO; and from space observations utilizing satellites, rockets and balloons, primarily funded by contracts and grants from NASA. The reduction and analysis of these data are performed with SAO's large interactive computing facilities in Cambridge. The resulting astrophysical models and scientific interpretations are published in scientific journals and reports and distributed widely to the world's scientific community.

Heaviest program emphasis is placed on those areas of research that support national scientific goals that offer practical benefits to humanity and that promise significant advances in the understanding of the cosmic environment surrounding the earth. Also, in astronomy, perhaps more than in any other field of science, the direction of research and the advancement of knowledge most often result directly from the development of new instrumentation. Accordingly, the resources (positions and research funds) resulting from the major program redirections instituted in FY 1979 combined with the increase of $300,000 appropriated by the Congress in FY 1979 for the MMT program are being applied to these purposes, with special emphasis on the development of instrumentation.

In the optical and infrared division, for example, the additional funds appropriated to the MMT program and a portion of the redirected research funds have allowed the construction of the MMT to progress to the point where scientific observations could begin in April or May of 1979, and, in parallel with the construction of the MMT, have permitted the development of instruments and electronic detectors that will eventually be placed on this telescope. In this connection, the additional funds appropriated by the Congress in FY 1979 for the MMT are planned for use in FY 1980 to proceed with systems integration and testing, completion of the finishing of the telescope's housing, construction of instruments for the telescope, and staffing for the operations stage. Also in this division, work continued on the development of the small, helium-cooled infrared telescope scheduled for flight aboard Spacelab II. This instrument is designed to make the first complete map of extended regions of low-level infrared emissions from the Milky Way.

In the solar and stellar physics division, the application of Langley-Abbot funds for a full-time research scientist to provide program continuity and coordination has provided for the continued advance of understanding about the intricate--and intimate--relationship between sun and earth. For example, an analysis of historic photoheliographic records revealed that a significant decrease in the rotation rate of sunspots accompanied a general rise in solar activity over the same period. Emphasis on these studies will continue into the 1980's for data now emerging suggest that understanding the physical process of the sun may lead to a better understanding of a variety of terrestrial phenomena, ranging from long-term climatic changes to atmospheric disturbances of radio and television transmissions.

In the high-energy astrophysics division, the addition of a staff astronomer contributed to the development of x-ray detectors which are now being used on instruments abroad the HEAO-2 (High-Energy Astronomy Observatory) satellite which carries the first high-resolution telescope capable of producing focused images of x-ray objects.

Similarly, the addition of a staff theorist in the theoretical astrophysics division will make possible through analysis of the data returned by the HEAO-2 a study of their significance with regard to cosmic evolution, perhaps even those questions surrounding the existence of the "missing mass" needed to close the universe. Other work in this division is concerned with atmospheric physics, relativistic astrophysics and gravity-wave physics.

Typical of the interrelated nature of SAO research, work on hydrogen masers originally undertaken in the geoastronomy division may now be applied to theoretical and experimental studies in relativistic astrophysics and gravity-wave physics and to work in the radio astronomy division on very long baseline interferometry (VLBI). The VLBI program is a truly national and international effort, requiring the cooperation and participation of

radio observatories on a world-wide basis. SAO is not only responsible for coordinating and scheduling many of the observational programs but also actively participates and collaborates with several academic institutions (nationally and internationally) in the acquisition, analysis and interpretation of the data. The addition of a VLBI radio astronomer and redirection of research funds to develop specialized VLBI equipment have made it possible for SAO to develop a viable and effective program in VLBI astronomy, one of the promising areas expected to advance the frontiers of astrophysical knowledge.

EXPLANATION OF PROGRAM CHANGE - In FY 1980, the requested net program increase of $37,000 is proposed as follows: (1) an increase of one position and $43,000 for the Langley-Abbot Program, (2) an increase of one position and $20,000 for an accountant, and (3) an offsetting reduction of two positions and $26,000 in other areas.

With the addition of a solar physicist in FY 1979, excellent progress is being made under this program in the area of solar-terrestrial relationships. Another area of major importance concerns the understanding of the physical processes of the sun and its atmosphere. This understanding will further man's knowledge of (a) solar variability and its short and long-term effects on the earth; and (b) the evolution of stars and the universe. While Langley-Abbot Visiting Scientists have been devoting some attention to this extremely complex area, it is clear that sustained progress will require in FY 1980 the dedication of an additional full-time solar physicist ($43,000) who will work closely with Langley-Abbot Visiting Scientists and other SAO scientist staff.

SAO's Federal research program budget has grown in complexity over the past several years. Administration of the MMT project in particular has changed from the issuance of several large contracts for construction of the telescope and its shelter to the maintenance of an operational program with a large number of small purchase orders for supplies and materials. For example, the volume of purchase orders under MMT has increased from some 600 in FY 1976 to nearly 1,100 in FY 1978. To handle the increased workload that has resulted from the MMT program, an additional accountant position and $20,000 are requested.

The requested increases are offset by a proposed reduction of two positions and $26,000. One clerical support position ($21,000) and an amount of $5,000 are being relinquished by the planetary sciences division as a result of a reduced research effort in the area of planetary sciences. One full-time technician position associated with the MMT will be eliminated by using a temporary in lieu of full-time permanent appointment. The temporary appointment is now considered appropriate in view of the likelihood that the University of Arizona will ultimately operate the MMT on behalf of itself and the Smithsonian.

In addition, a permanent base reduction of $160,000 has been effected in FY 1979 as a result of the decision by the Board of Regents to use non-appropriated Trust funds to finance the Fellowship and Visiting Scholars Programs. These Programs have been financed previously with appropriated funds.

SAO Research Highlights and Other Developments

Accomplishments in FY 1978.

--Launch on January 26 of the International Ultraviolet Explorer (IUE) Satellite providing astronomers, including two teams from SAO, with the first spectrographic instrument designed for celestial observations across a wide range of ultraviolet wavelengths.

--Analysis of data from the IUE Satellite revealing that conditions in the center of some globular clusters indicate the presence of an extremely dense mass, most likely a black hole.

--As part of the Langley-Abbot Research Program, a detailed analysis of historic, photoheliographic plates taken over the past century revealing a significant decrease in the

rotation rate of sunspots accompanying a general rise in solar activity over the same period.

--The first simultaneous observations of optical and x-ray emissions from a so-called cosmic burster made by scientists at MIT using the SAS-3 Satellite and an SAO researcher using a telescope at the Cerro Tololo Observatory in Chile.

--"First light" of the Multiple Mirror Telescope (MMT), a joint project of SAO and the University of Arizona at the Mt. Hopkins Observatory, on May 15, 1978, a prelude to final testing phases.

--Move of the headquarters of the Minor Planet Center of the International Astronomical Union (IAU) to SAO, to be operated jointly with the IAU's Central Telegram Bureau, making SAO the world's clearinghouse for information concerning virtually all new astronomical discoveries.

--Successful experimentation of an instrument prepared by SAO and MIT scientists for flight abroad the HEAO-1 Satellite. The instrument, designed to measure the precise positions of cosmic x-ray sources, confirmed and extended previous results on several strong x-ray objects near the center of our galaxy and discovered a new transient, x-ray source in the constellation Ophiuchus.

--Operation of two new electronic devices at Mt. Hopkins, the Charged Coupled Device Camera and the "Redshift Machine," both designed to enhance the observational capabilities of conventional telescopes. These devices will be used on the MMT.

--Use of laser tracking data from SAO field stations, combined with other data from the GEOS-3 Satellite, producing the first comprehensive global model of the earth's gravity field.

Accomplishments in FY 1979

--Public opening of the joint Smithsonian-University of Arizona Multiple Mirror Telescope facility at Mt. Hopkins in Arizona. (Originally scheduled for FY 1978, but due to necessary testing and integration of optical and electronic components and the desire to complete essential interior work, the public dedication was postponed until spring of 1979.)

--Launch and successful operation of the HEAO-2 Satellite carrying the first high-resolution telescope capable of focusing images of x-ray sources. (The NASA launch, originally planned for FY 1978, was rescheduled for early FY 1979.)

--Reduction and analysis of x-ray data from the HEAO-2, and the coordination of the Guest Investigator Program.

--Study of conceptual designs for detectors and instruments for proposed large x-ray space telescopes.

--Design of instrumentation, particularly electronic detectors, for use on the MMT.

--Balloon flight of an infrared spectrometer developed and operated jointly by SAO, Harvard College Observatory, and the University of Arizona.

--Development of hydrogen masers of extreme accuracy for use in continuing programs of VLBI radio astronomy, geophysics, relativity experiments, gravity-wave physics, and deep space probes.

Plans for FY 1980

--Final preparation of a small, helium-cooled telescope, scheduled for 1982 flight on Spacelab II to make the first complete map of extended regions of low-level infrared radiation emission from the Milky Way. The experiment will also observe zodiacal emission in the solar system and make the first all-sky survey of infrared radiation from intergalactic matter, distant galaxies, and quasi-stellar objects. The telescope is a joint project with the University of Arizona and the Marshall Space Flight Center.

--Regularly scheduled scientific observations using MMT, with emphasis on the spectral analysis of light from some of the most distant and faint objects in the universe.

--Continued development of the MMT facility, particularly new instrumentation supporting optical observations.

--Continued balloon flights of instruments designed for infrared observations.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose--Funds are provided from allotments and are used to support 74 administrative positions and other costs of SAO. These administrative costs are recovered fully from overhead charged on grants and contracts.

Funds are used for travel and related costs of small individual research grants; scientific lectures and meetings hosted by the Observatory; and for special events associated with the dedication of the MMT in the spring of 1979. Also, an amount of $160,000 has been provided to SAO beginning in FY 1979 to finance the Fellowship and Visiting Scholar Programs, formerly financed with appropriated funds.

Restricted Funds--Funds provided here are in the form of restricted endowment accounts and foundation grants which specify the use of the donation or bequest and of gifts provided by organizations or corporations for specific purposes. Generally the funds provide support for a particular project. Examples include the Sprague Endowment fund which provides for meteoritic studies, and the Max Planck Institute's grant which supports the development and manufacture of a hydrogen maser system.

Federal Grants and Contracts--SAO receives substantial funding from Federal agency grants and contracts for work which is integrated fully with both governmental and academic institutions in the United States and abroad. The funding comes from the National Aeronautics and Space Administration for space science projects, particularly in the high-energy astrophysics and geoastronomy divisions. Some funding from other Federal agencies (such as the Naval Research Laboratory and the Air Force) is received to support specific projects in areas of SAO's expertise.

SMITHSONIAN TROPICAL RESEARCH INSTITUTE

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	65	1,743	2	49	-	79	-	41	-	14
FY 1979 Base	67	1,802	3	79	-	48	1	73	-	-
FY 1980 Estimate	72	2,257	3	84	-	49	1	75	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

		Base FY 1979	Proposed Adjustments	Est. FY 1980
	Number of Permanent Positions....	67	5	72
	Number of Other Positions.....	4	3	7
11	Personnel Compensation.....	1,148	175	1,323
12	Personnel Benefits.....	210	91	301
21	Travel & Trans. of Persons...	58	8	66
22	Transportation of Things.....	15		15
23	Rent, Comm. & Utilities.....	98	20	118
24	Printing and Reproduction....	8		8
25	Other Services.....	75	100	175
26	Supplies and Materials.....	170	61	231
31	Equipment.....	20		20
	TOTAL	1,802	455	2,257

Analysis of Change

Necessary Pay.....	38
Program Funds.....	417

ABSTRACT - The Smithsonian Tropical Research Institute (STRI) located on the Isthmus of Panama is the nation's leading basic tropical biology research center. The Institute's goals are to conduct advanced studies in the biology of tropical organisms and to increase and diffuse knowledge of their ecology, behavior and evolution. In addition to fundamental research, STRI has the responsibility of promoting education and conservation in the tropics. The Institute operates a series of field stations, including those on Barro Colorado Island, which provide unique settings for scientists to carry on their research projects. They permit STRI scientists to assess, compare and establish experiments and observational studies of fundamental biological problems, as well as of relevant environmental and conservation problems.

Under the recent Panama Canal Treaties between the United States and the Republic of Panama, STRI has been designated by both governments as the custodian of the Barro Colorado Nature Monument, which includes not only Barro Colorado Island, but also four adjacent

peninsulas in Gatun Lake. Furthermore, under this treaty, STRI will be operating under three different sets of government regulations: those of the U.S. Government, of the Government of the Republic of Panama, and of a binational commission with representatives of both governments. Nevertheless, STRI's scientific mission will remain unaltered since the concerned governments are supportive of its unique and important research mission. This was clearly established by the agreement signed on January 5, 1977 (prior to the above mentioned treaty) between the Minister of Health of the Republic of Panama and the Director of the Smithsonian Tropical Research Institute, and was reaffirmed by the subsequent incorporation into the above treaty of two exchange notes.

In FY 1980, a total of five additional positions and $417,000 is sought as follows: (1) five positions and $377,000 are requested to defray expenses resulting from the implementation of the Panama Canal Treaties and associated agreements in the areas of administration, security, education and conservation; and (2) the remaining $40,000 is requested to provide urgently needed maintenance services at several locations throughout STRI. Necessary pay in the amount of $38,000 is required for existing staff.

PROGRAM - The tropics contain areas with the highest diversity of life on earth. Good examples of such areas are tropical rain forests which may have hundreds of species of trees per acre, whereas a similar area in a temperate forest may contain only about 10-12 species. The extremely diverse flora and fauna of a coral reef are without counterparts in the temperate zones of the world. These complex and remarkably diverse tropical environments with thousands of species of plants and animals living together are under stress, largely as a result of human activities. In many areas of the world they are threatened with extinction before there has been the opportunity to learn very much about them. The goal of the Smithsonian Tropical Research Institute is to increase and diffuse knowledge of the ecology, behavior and evolution of the organisms living in the tropical zones.

The tropics are considered to be the "cradle of life." Studies conducted there are aimed at learning about the evolution of life on this planet. By studying organisms in complex tropical environments, a better understanding of life in temperate zones is gained as well. Life on this planet represents a continuous interacting spectrum from one polar region to another. Unfortunately, the tropics are little understood, having received relatively little attention from scientists, in spite of the residence in this region of the most rapidly increasing segments of the human population. This growth is threatening these areas before they have been adequately studied and methods are derived to protect this heritage of tropical organic diversity.

The scientists at the Smithsonian Tropical Research Institute are seeking to gain an understanding of how tropical organisms evolved; how they compete for limited space and divide their resources; what are their reproductive strategies; how resistant are they to change; what are their short-term, annual, and long-term cycles? These studies will develop hypotheses on the organization and interaction of ecosystems and will produce new concepts dealing with behavior of living organisms on this planet.

Scientific research at STRI is related to many contemporary environmental problems. For example, STRI expertise in the marine ecology of the Isthmus is fundamental to studies which assess the possible impact of a major oil spill in the event of an accident resulting from the transshipment of Alaskan oil via the Canal. Marine ecology expertise is also important to the studies on construction of a sea level canal. In forest ecology, STRI's knowledge is crucial to the Governments of both Panama and the U.S. for effective planning for reforestation and protection of the Panama Canal watershed. In addition, STRI ecologists and behaviorists are in a unique geographical situation to provide essential and fundamental pre-invasion analysis of pollinating organisms before the impending invasion of the Africanized (killer) Brazilian bees. Rarely has such an invasion telegraphed its arrival in advance. This invasion will eventually reach the U.S. with subsequent serious economic consequences. The arrival of these bees in Panama had been forecast to occur between 1983 and 1985, but new information recently obtained indicates that such an invasion will be experienced within the

next two years. This speeds up the necessity for establishing an accurate baseline from which to evaluate the effects of this aggressive colonizer on the native insect competitors and the plants which they pollinize.

EXPLANATION OF PROGRAM CHANGE - A total increase of five positions and $417,000 is requested for FY 1980. The requirement for five new positions and $377,000 stems from additional responsibilities that STRI will assume as a result of the Panama Canal Treaties and associated agreements. These responsibilities are in the areas of administration, security, conservation and education. A further amount of $40,000 is requested for various essential maintenance services.

Treaty-related Requirements - During the next several years, STRI will undergo major changes as a result of the Panama Canal Treaties. These changes have significant resource requirements associated with them. Services that were formerly available from the Panama Canal Company and the Department of Defense such as personnel administration, mail delivery, customs, and labor and immigration services, as well as commissary access, will cease to exist. Two new positions and $32,000 are requested for administrative personnel to carry out these functions for STRI. An additional $108,000 is sought to compensate staff for additional expenses resulting from the Treaties. Compensation to the staff will be made for the losses of the 15 percent tropical differential, and the Canal Zone commissary and post exchange privileges. This compensation will take the form of housing and cost-of-living allowances which will be provided according to schedules developed and used by the Department of State for United States employees overseas. A further $81,000 is needed to offset the expected higher costs for the Institute's utilities and supplies as a result of having to purchase these items from the Republic of Panama instead of from the Panama Canal Company.

The implementation of the Treaty will require establishment of closer program and administrative ties between STRI scientists and administrators and the Smithsonian Institution, State Department, U.S. Department of the Interior, and different Latin American countries. An additional $8,000 in travel funds to allow STRI to fulfill these demands is requested.

A new position and $50,000 are sought for an education assistant position and for the funding of the recently established position of education officer. (The position for the education officer was made available to STRI in FY 1978 by the transfer of a vacant position from the Office of the Assistant Secretary for Science.) These positions will comprise the core staff of a newly created office of conservation and environmental education. This office is developing means to disseminate the results of STRI's scientific studies in ways that will supplement the conventional publications in scientific journals, presentations at scientific meetings, symposia and congresses. Activities of the office already have included advising the U.S. Department of the Interior and the Ecuadorean Government on the planning of a park and biological research station in the Yasuni River area on Ecuadorean Amazonia; providing advice on the establishment and revision of the Canal Zone governments' hunting regulations; and actively participating on the Environmental Subcommittee of the Joint Commission created by the Carter-Torrijos treaties. This subcommittee is developing and enhancing an antide-forestation campaign for the protection of the Panama Canal watershed. The office also coordinates the activities of environmental organizations from several countries, and develops, designs and implements an environmental seminar for teachers from the public education system of the Republic of Panama.

In keeping with the environmental clauses of the treaties and as an adjunct to the conservation and education program, STRI is planning to promote the conservation of forests by assisting in the development of a natural educational park after the style of national parks in the United States and Canada. The development of such a park will serve as a model and a catalyst for the further establishment of parks in the tropics. A major focus in the developing of the park will be the teaching to children and adults living in the area about the ecology and natural history of the local plants and animals and about the necessity for preserving the environment. It is anticipated that the maintenance and protection of the park will be the responsibility of the Republic of Panama with the assistance of a loan from

the Agency for International Development. The responsibility of STRI will be to assist in the administration of the park, particularly in the preparation of interpretive and scientific materials, field guides and park plans. An additional two positions and $98,000 are requested to permit the development of this park. The two positions and $23,000 are for a game warden and park supervisor who assist in the development and operation of the natural reserve. The remaining $75,000 will be used for part-time staff or contract employees who will write manuals and field guides as well as translate appropriate materials into Spanish; for publication costs; and for costs associated with the development of a central information visitors center.

Maintenance Requirements - Finally, an additional $40,000 is requested for maintenance services including: food handling on Barro Colorado Island; janitorial services at the administrative offices; and carpentry services urgently needed to provide laboratory facilities for the scientists and to maintain the facilities, boats and research vessels in good condition.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds are derived from a variety of sources including receipts and collections from uses of Barro Colorado Island facilities, and from allotments. The funds are used to help finance field research, seminars, and lectures; support scholars from outside the Smithsonian who are doing research at the Institute; and to defray the cost of representational expenses at international scientific colloquia and ceremonial occasions.

Restricted Funds--Funds under this category are derived from restricted endowments which specify the use of the donation or bequest and from corporation and foundation grants. These funds are used to support scientific research related to geophysical events and to support studies relating to endangered tropical environments. For example, the Becker Endowment fund supports research on the follow-up of a natural reforestation of an earthquake-devastated forest on the Colombian/Panamanian border; an Exxon grant in FY 1979 is being used for fellowships supporting research performed by students from developing Latin American countries under the supervision of the STRI scientific staff; and the Doherty Foundation grant in FY 1979 is being used to furnish research equipment for a scientific vessel used to conduct research studies.

RADIATION BIOLOGY LABORATORY

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	48	1,721	-	-	-	6	-	19	2	92
FY 1979 Base	48	1,759	-	31	-	-	1	32	3	108
FY 1980 Estimate	49	1,807	-	31	-	-	-	15	3	101

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	48	1	49
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	1,001	34	1,035
12 Personnel Benefits.....	98	4	102
21 Travel & Trans. of Persons....	10	5	15
22 Transportation of Things.....	5		5
23 Rent, Comm. & Utilities.....	247		247
24 Printing and Reproduction.....	10		10
25 Other Services.....	50		50
26 Supplies and Materials.....	186		186
31 Equipment.....	152	5	157
TOTAL	1,759	48	1,807

Analysis of Change

Necessary Pay.....	23
Program Funds.....	25

ABSTRACT - Environmental factors--light, temperature, humidity and atmospheric content--influence the growth and development of biological systems. The Radiation Biology Laboratory (RBL) monitors these factors in the environment, developing long-term data banks of seasonal and annual trends, and then duplicates these environments under laboratory conditions to determine the nature and extent of their influence on the growth and development of plants and animals. There is a continuing increase in requests for the data derived from RBL's programs in regulatory biology, environmental analysis and carbon-14 dating. For FY 1980, one new position and an increase of $25,000 are requested for a carbon dating technician to meet increasing demands to process archeologically and geologically significant samples for the Institution's museum and research complexes. In FY 1979, a permanent base reduction of $31,000 was effected resulting from the decision by the Board of Regents to use non-appropriated Trust funds to finance the Fellowship and Visiting Scholars Programs previously covered by appropriated funds. Necessary pay in the amount of $23,000 is required for existing staff.

PROGRAM - The research of the Laboratory concerns itself with three principal areas: regulatory biology, environmental biology and carbon-14 dating. Since its inception in 1928, the Laboratory has pioneered research into the influences on growth of the color quality and near-visible light such as ultraviolet. The present experimental program is of greater scope than it is in any other single laboratory. The laboratory has been credited with major contributions in the fields of photobiology and action spectroscopy, and in the development of primary standards for the measurement of solar energy.

Light is the key controlling environmental factor for development and growth of biological systems. Storage of solar radiation as chemical energy in photosynthesis is basic for all life on earth. The use of this energy is regulated by subtle, changing signals of light quality, duration and intensity. A primary objective of the Radiation Biology Laboratory is to explain the influences of the various factors in the environment--light, temperatures, humidity and atmospheric content--on growth and development and to characterize the molecular mechanisms through which these signals operate.

This aim is accomplished by studying these environmental influences on plant growth and development in the laboratory under controlled conditions using biochemical, biophysical and physiological techniques, and then verifying the importance of these processes in nature by monitoring the natural changing environment. An example of response to national needs has been the daily monitoring of UVB (Ultraviolet Radiation "B") for over a year at three geographical locations to provide biologists and other scientists with the only measurements of UVB energy at the surface of the earth. The data can be used to assess the impact of changes in atmospheric ozone content and the incidence of skin diseases due to UVB. Such programs of research by their very nature are long term and require the concerted team efforts of many scientific disciplines. Disciplines represented at RBL include physiology, cytology, biochemistry, physics, engineering, electron microscopy and morphology.

Major accomplishments in FY 1978 include the following:

1. Discovery that supplemental lighting of lettuce with flashing light produces greater vegetative growth than the same amount of supplemental continuous light of equal energy.

2. Measurement of seasonal assimilation of carbon for two of the most common plants in marsh communities along the Chesapeake Bay indicating that these salt marshes export a significant amount of carbon to the nearby estuaries.

3. Discovery that flowering of barley in nature is stimulated by changes in the relative amounts of far-red light occurring at twilight.

4. Demonstration that the process of photosynthesis does not have to be active to enable flower induction in Lemma (duck weed) plants.

EXPLANATION OF PROGRAM CHANGE - The carbon dating laboratory at RBL dates archeologically and geologically interesting and significant samples for the Institution's museum and research complexes. For example, through the carbon dating of bones and charcoal, it was determined that an archeological site in Western Pennsylvania was 18,000 to 19,000 years old, thereby changing notions of when man first came to North America. Also of geological significance, the carbon dating of sediment cores in the Mediterranean conducted by Laboratory staff has indicated that massive climatic changes occurred in that area, 10,000 to 12,000 years ago. Approximately 300 such samples are dated each year by a staff of one scientist assisted by a technician. A backlog of nearly a year's work exists. To alleviate this backlog as well as to meet increasing demands for carbon dating, one additional technician position and $25,000 are sought.

The decision by the Board of Regents to use non-appropriated Trust funds to finance the Fellowship and Visting Scholars Programs, previously supported by appropriated funds, has enabled RBL to reduce its Federal base by an amount of $31,000. RBL had been applying that amount to support two post-doctoral research scientists each year as well as to fund a visiting scholar seminar program.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--Small amounts were provided in FY 1978 from contributions from universities and other scientific institutions to support scientific work conducted by RBL. No such contributions are anticipated for FY 1979 and FY 1980. Also, an amount of $31,000 has been provided to RBL beginning in FY 1979 to finance the Fellowship and Visiting Scholar Programs, formerly financed with appropriated funds.

Restricted Funds--Funds are provided here in the form of restricted endowment accounts and foundation grants which are designated for specific subjects of investigation. For example, the Eppley Foundation grant (projected expenditures of $4,000 in FY 1979) is used to support investigation of biological responses to solar radiation, and the Rollins Endowment fund (projected expenditures of $20,000 in FY 1979) is used to support the study of the physical measurements of radiation. A decrease in available funds is anticipated in in FY 1980 due to the termination of the Eppley Foundation grant.

Federal Grants and Contracts--These funds are provided by various agencies and departments for special projects that can be conducted at RBL because of its specific expertise and unique facilities. Examples of Federal contract support are the Department of Energy's support of research on membrane-associated pigments of algae involved in photosynthesis and flashing light control of rates of photosynthesis in plants (projected expenditures of $26,000 in FY 1979). The National Aeronautics and Space Administration supports the measurement of ultraviolet radiation received at the earth's surface which is correlated with the effects of material degradation due to exposure to sunlight (projected expenditures of $67,000 in FY 1979). RBL anticipates this level of funding to remain relatively constant.

NATIONAL AIR AND SPACE MUSEUM

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	230	5,777	-	31	24	939	1	39	5	176
FY 1979 Base	229	5,785	-	10	24	1,261	2	79	5	250
FY 1980 Estimate	227	5,791	-	15	24	1,212	1	85	5	139

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	229	-2	227
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	3,857	94	3,951
12 Personnel Benefits.....	378	9	387
21 Travel & Trans. of Persons.....	18	22	40
22 Transportation of Things.....	5	11	16
23 Rent, Comm. & Utilities.....	47		47
24 Printing and Reproduction.....	167		167
25 Other Services.....	870	-176	694
26 Supplies and Materials.....	309		309
31 Equipment.....	134	46	180
TOTAL	5,785	6	5,791

Analysis of Change

Necessary Pay.....	103
Program Funds.....	-97

ABSTRACT - The National Air and Space Museum (NASM) was created by Congress to memorialize the development of aviation, space flight and space science; to collect, preserve and exhibit aeronautical, space flight and space science artifacts of historical and technical significance; to conduct research; and to serve as a repository for documentary and artistic materials related to air and space. For FY 1980, a decrease of two positions and $97,000 is proposed, reflecting the shift in program emphasis initiated during FY 1979. There will be a reduced emphasis on new exhibits, training and pilot research efforts. The Museum's major research program as well as conservation, collections inventory and education programs will receive additional attention. Necessary pay in the amount of $103,000 is required for existing staff.

PROGRAM - Since the National Air and Space Museum was opened to the public on July 1, 1976, it has been visited by more than 26,000,000 persons. The press and public have continued to endorse enthusiastically the 23 exhibit galleries and two performance centers. Since the Museum has opened, two galleries have been upgraded as anticipated. These are the "Air Transportation" and "General Aviation" exhibits which explore commercial, private, executive, agricultural and recreational aviation. Two new galleries were opened in FY 1978 in an effort to maintain and enhance a dynamic exhibits program. The gallery, "Flying for Fun," depicts the human, recreational side of flight, and the exhibit, "Exploring the Planets," is an exposition of the information gained in the last decade from our space program.

There were several smaller exhibits opened and additions made to the Museum during FY 1978 including "mini-exhibits" to commemorate special achivements of individuals or anniversaries. These included tributes to: the man-powered aircraft, the "Gossamer Condor"; to James Doolittle, Grover Loening, and Wernher von Braun; to the 1929 endurance flight of the aircraft, "Question Mark," and the growth of aerial refueling; to the "Apollo to the Moon" Results Area; and to "The 75th Anniversary of Flight."

During the course of FY 1979, preparations for a new show entitled "Worlds of Tomorrow" will be undertaken for performance in the Albert Einstein Spacearium. Work will continue on a film to replace or supplement the current very successful film "To Fly." A number of special presentations, lectures and films also will be given.

As the museum's major research organization, the Center for Earth and Planetary Studies (CEPS) conducts programs in lunar, planetary and earth-related research. By interpretation of computer models and photographs produced by satellites, the center collects, analyzes and extrapolates data to further scientific understanding of planetary evolution. Investigations of lunar basins and craters have increased understanding of the processes that shape the lunar surface and the geologic evolution of the moon. By using computers to create modeling of lunar basin formation and filling, scientists can interpret similar features on terrestrial planets which will shed light on their geologic history. Another area of CEPS research is comparative planetology. Researchers study and classify planets with the aid of satellite photography and interpret planetary origins in order to establish the similarities and/or differences in the history and evolution of the planets from a geomorphologic viewpoint. In FY 1979, the center will purchase from the National Science Data Center more satellite images and negatives, particularly the Viking images of Mars and Pioneer images of Venus, to add to its reference collection. Earth-related research has employed satellite photographs to study arid and semi-arid environments in order to establish the parameters of desertification. Focusing particularly on the Egyptian desert in a joint research project with Cairo's Ain Sham University, NASM scientists will conduct an experiment in dune stabilization and develop a remote meteorological data collection platform for desert monitoring. Information gained from this project will be applied to the study of other deserts on this planet and similar areas on Mars.

The Museum's expanded education programs, established in FY 1979, will be implemented in FY 1980. The education division will continue to provide motivation to the public to learn more about the history of air and space, to provide information on careers in these fields and to work towards increasing understanding of the human and technical accomplishments of the type which are memorialized in the Museum. One of the means used to help achieve these objectives is the publication of a free periodical, "Air and Space," which is distributed to educators bimonthly during the school year. This well-received publication has a current circulation of 30,000. Special programs such as those that prepare pre-visit materials that relate to the curriculum of district schools, tour operations and internships also are sponsored by the education division. Other operations include production of lectures, filmstrips and cassettes, and development of curriculum. Efforts are underway to establish liaison with state educational personnel to establish training programs for use of these education materials in the states.

Collections management efforts have received increasing attention over the past year. A sophisticated inventory is underway, and extensive care will be taken to assure the proper preservation and storage of the inventoried items. An effort to improve the Museum's archives is also underway and a microfiche program is being established in order to furnish better service to customers and researchers.

Aircraft, engine and component restoration work will continue at NASM's Suitland facility. The work on the Curtiss Pusher, Bleriot XI, Messerschmitt Me-262 (a German jet fighter of World War II), and the Gallaudet glider will be completed, while the restoration process will continue for a Chance Vought F4U Corsair, a Piasecki PV-2 helicopter, a Northrop NIM flying wing and a series of antique aero engines.

A fourth warehouse building at the Suitland facility will be opened to the public for tours. Aircraft included in this building are the Enola Gay--the B-29 which dropped the atomic bomb on Hiroshima, the world's first operational jet bomber, and the only example of an officially developed flying saucer.

The exhibit program will continue with the opening in FY 1980 of two new galleries, "Early Flight" and "Jet Aviation," and the introduction of a major innovation in museum practice, a "Center for Live Demonstration." The center will feature educators presenting shows on principles of aviation not easily communicated by exhibits and encouraging interaction between members of the Museum staff and the public. Additionally, the "Balloons and Airships" Gallery will be revised to include the "Double Eagle II," the first manned balloon to cross the Atlantic. "Our Beautiful Earth," a photographic exhibit will be shown in the "Flight in the Arts" Gallery to complete the planned exhibit program for FY 1980.

The professional staff will continue the research and publication program. FY 1980 publications will include: U.S. Women in Aviation, 1919-1928, Russian Aviation in WWI, A History of McCook Field, Great People of Flight Technology, Technology Transfer from Flight, and Prelude to Age of Space.

EXPLANATION OF PROGRAM CHANGE - In FY 1980, a decrease of two positions and $97,000 is recommended. Savings will be achieved by deferring work until FY 1981 on a new exhibit gallery, "Your Future in Space"; by curtailing the training program for staff of regional museums; and by reducing some pilot research studies. The proposed reduction is a reflection of the shift in program emphasis begun in FY 1979. The Museum's major research efforts, which involve examination of specific planets and the moon in order to shed light on the evolution and interrelationship of the universe, and the education program are receiving more emphasis than in the previous two years when most attention was focused on the exhibits program.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds are derived from a variety of sources including the Museum's share of sales in the museum shop; product development royalties; restaurant and concession fees; net proceeds resulting from bureau activities (such as the Theatre and Spacearium); and small allotments. These funds are used to finance fellowships; the publication of books and a bi-monthly newsletter; guest lectures; and special events for the opening of new exhibits. An amount of $100,000 is provided annually to endow the "Lindbergh Chair in Aerospace History" which is awarded to a distinguished scholar each year. In addition, a portion of the net proceeds from the Theatre and Spacearium activities is being reserved in a fund for eventual replacement of the film "Planet." The new film is scheduled for showing in the summer of 1979.

Restricted Funds--Restricted funds are provided through donations, bequests and foundation grants by individuals, organizations and corporations for specific purposes. Examples of these funds include the David Guggenheim fund (projected expenditures of

$9,000 in FY 1979) which finances exhibits, lectures and scholarships, and the Ramsey Endowment fund (projected expenditures of $21,000 annually) which finances selected research relating to naval flight history.

Federal Grants and Contracts--These funds are provided by various agencies and departments for special projects which can be conducted at the National Air and Space Museum because of its special expertise in a given area. For example, studies in lunar and planetary research in photogeology are conducted by NASM's Center for Earth and Planetary Studies under a grant from the National Aeronautics and Space Administration.

Several current contracts conducted by the Center for Earth and Planetary Studies are scheduled for completion in FY 1979. Accordingly, the FY 1980 funding level is expected to decrease.

CHESAPEAKE BAY CENTER FOR ENVIRONMENTAL STUDIES

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	21	626	17	108	-	37	-	1	9	487
FY 1979 Base	22	692	13	204	-	7	-	11	7	300
FY 1980 Estimate	21	706	1	64	-	7	-	-	7	300

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	22	-1	21
Number of Other Positions.....	2	1	3
11 Personnel Compensation.....	500	-15	485
12 Personnel Benefits.....	49	-2	47
21 Travel & Trans. of Persons...	8		8
23 Rent, Comm. & Utilities.....	23	9	32
24 Printing and Reproduction....	4		4
25 Other Services.....	24	15	39
26 Supplies and Materials.....	49	7	56
31 Equipment.....	35		35
TOTAL	692	14	706

Analysis of Change

Necessary Pay.....	14
Program Funds.....	0

ABSTRACT - The Chesapeake Bay Center for Environmental Studies (CBCES) is a 2,600-acre natural area for research on land/water relationships for use in creating public awareness and understanding of ecological systems as they might be affected by human disturbance. The Center's activities are divided into three categories: environmental research, education, and administration and facilities management. For FY 1980, the Center proposes a decrease of one position with the $30,000 of related salary monies to be redirected for environmental research support purposes. Necessary pay in the amount of $14,000 is required for existing staff.

PROGRAM - Environmental Research: The Center's Environmental Research Program has as its general goal the development of a quantitative understanding of the functioning of a watershed-estuary ecosystem and the assessment of the effects of environmental change on natural and human communities in this system. The program has three principal elements--upland ecology, watershed studies and estuarine ecology.

Upland Ecology - This program has as its goal the understanding of the evolutionary ecology of plant and animal populations as they are affected by existing and past land use practices. Specific objectives of this program are to compare ecosystem properties of a full range of land use types including the effects of land use practices which have occurred since the time of first settlement. A study of the history of land use on the Center's properties will be completed and published in FY 1979. Study sites established in FY 1979 will be representative of the range-use types prevalent in the coastal plain with the addition of lawns, pastures and newly abandoned agricultural field. Interdisciplinary research on plant and insect interactions and successional processes was initiated in FY 1978 and will be extended to each of the study sites in FY 1979.

Upland Ecology Projects in FY 1979

--Complete data acquisition phase of a study to determine the effects of the species composition and configuration of small forest patches in supporting animal populations.

--Estimate the supply and distribution of major plant nutritional elements (potassium, calcium, magnesium, and sodium) in forest sites.

--Complete a survey of vine competition in mature woods and areas undergoing early succession.

--Complete a study of the relationship between primary productivity and water availability during early succession stages.

--Publish results of a study on the effects of lawn management on insect populations.

--Publish results of research on the adaptive strategy of flora and fauna in lawn communities to human disturbance.

--Indicate monitoring of yearly fluctuations in deer populations in island habitats.

--Monitor the recovery of plant populations in habitats formerly overgrazed by deer.

--Complete project on the ecology of communities subject to varying degrees of human disturbance.

--Continue yearly survey of small mammal populations in island habitats.

--Initiate studies on the characteristics of weedy plants inhabiting cultivated fields.

--Continue yearly survey of small mammal populations in island habitats.

--Initiate studies on the characteristics of weedy plants inhabiting cultivated fields.

Watershed Studies - The goal of this research is to determine quantitatively the relationship between land use and land runoff in an estuarine watershed system of the eastern coastal plain. The specific objectives of this program are to monitor and analyze the constituents of runoff, rainfall and ground water flow in a watershed and to assess the effects of land use on these parameters. Analyses are being made of nutrients, sediments, bacteria, trace metals and pesticides. In order to carry out this program a system of automated gauging stations and collectors has been assembled to permit continued monitoring of the total runoff from the Rhode River watershed and to measure rainfall and ground water flow. A series of small drainage areas representing watersheds in a single land use are being similarly instrumented to be used for comparative studies. The instrumentation phase of this project will be completed in FY 1979.

Watershed Studies Projects in FY 1979

--Complete and publish the results of a study on the effects of land use practices on soil microorganisms.

--Complete and publish a study on the effects of the tide on the movement of bacterial pollutants in estuarine headwaters.

--Publish results of current research on the movement of herbicides in the soil of corn fields.

--Estimate the amount of herbicides present in rainfall.

--Continue monitoring land runoff from the Rhode River watershed to assess the effects of land use on water quality parameters.

--Continue the survey of farm operators to determine rates of fertilizer and pesticide applications and numbers of livestock in the Rhode River watershed.

--Publish the results of a study which relates land use and land runoff on a comparative basis in the Rhode and Patuxent Rivers' drainage areas.

Estuarine Ecology - The goal of this program is to determine the effect of land runoff on estuarine water quality, wetlands productivity, and human uses of estuarine and coastal areas. The objectives of this program are to describe the ecological pathways and processes affecting important estuarine communities; to assess the role of various communities within an estuary in supporting fish and shellfish species; and to characterize human uses of estuarine and coastal areas relative to environmental change. In FY 1979, three permanent monitoring stations were completed and operating to measure direct transport of materials into the Rhode River estuary from tidal creeks and marshes. Work initiated in FY 1978 on the effects of agricultural herbicides in land runoff will be continued in FY 1979 and the results published. Research continued on the role of phytoplankton and bacteria in the ecology of estuaries and emphasis was placed on the importance of certain algae species in providing food resources for higher levels of estuarine organisms. A year-round study of the role of headwater rivers and marshes in supporting spawning and early life stages of estuarine fish was begun in FY 1978 and will continue through FY 1982.

Estuarine Ecology Projects in FY 1979

--Continue surveying the spawning success and survival of white and yellow perch in streams tributary to the Rhode River.

--Continue investigations aimed at determining distribution of agricultural herbicides in the open waters and bottom sediments of the Chesapeake Bay.

--Complete studies on the toxicity of agriculture herbicides to submerged aquatic vegetation in the Chesapeake Bay.

--Complete and publish a study on the effects of inhibitors on the primary productivity of estuarine plankton communities.

--Complete current research on the relationship between primary productivity and secretion rates of organisms and the occasional rapid growth of plankton.

--Initiate systematic monitoring of estuarine animal populations in relationship to environmental change.

--Continue monitoring of principal water quality parameters in the Rhode River and its tributaries.

--Initiate study of sunlight penetration in Rhode River and factors which control penetration, and the effects of sunlight on estuarine plants.

Education/Public Information: Education and public information activities at the Center have as their goal the improvement of the quality and effectiveness of outdoor education and the achievement of maximum utilization of the Center's research findings by affected agencies and the general public. The objectives of this program include the determination of the effects of outdoor settings on the learning experience for both adults and young people; the development of educational materials which illustrate general principals of ecology; the development of semi-technical reports which illustrate the significance of

the Center's research findings for environmental planning and management issues; and the initiation of educational programs for all ages which can be self-administered and are designed primarily for use in community and home learning environments.

Education and Public Information Projects in FY 1979

--Complete and publish continuing research on the effects of outdoor settings on the learning of school-aged children.

--Complete and publish research on public school field trips.

--Complete and publish first edition of "Estuarine Ecology" curriculum for 10-15 year-olds.

--Complete first pilot version of family-oriented self-administered education materials on the ecology of lawns.

--Complete and publish continuing research on people's preference for natural landscapes.

--Begin development of parent/pre-school environmental education materials.

--Expand volunteer tour program to encompass the diversity of the Center's natural setting and to reach a broader segment of the general public, including senior citizens, family groups, students and professional associations.

--Update and expand bibliography of research conducted at the Bay Center, and publish summaries of current research for general consumption.

EXPLANATION OF PROGRAM CHANGE - For FY 1980 the position of facilities planner will be unnecessary since adequate planning and engineering services are provided through the Institution's central office of facilities planning and engineering services. The funds associated with the position ($30,000) are proposed to be redirected for environmental research support purposes. The decline in the level of grant and contract research support available to the Center, coupled with higher support costs associated with environmental research, have led to a shortage in this critical area. The funds will be used for temporary employees (technicians) and for research supplies and equipment.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds are provided by allotments and have been used to construct, furnish, and equip a new laboratory wing at the Center. Also funded are various education programs such as the summer ecology program, and the work/learn program for graduate and undergraduate students studying at the Center. Funds are used also for the salary costs of a docent coordinator and environmental information specialist whose task is to disseminate to the public the results of research being conducted by the staff; for printing of the CBCES newsletter of staff and research activities; and for real estate tax payment and insurance.

Restricted Funds--Funds are provided here in the form of gifts from organizations or corporations for specific purposes. Most of the funds projected for FY 1979 are for the purpose of developing environmental education material which, when published, will be available for distribution to schools nation-wide. No funding is anticipated at this time for FY 1980.

Federal Grants and Contracts-- These funds are derived from various state and Federal agencies for work to be carried out at the Bay Center, given the Center's particular expertise and facilities. Examples for FY 1979 and FY 1980 are grants from the Maryland Department of Natural Resources to study "Configuration of Forest Patches Necessary to Maintain Bird and Plant Communities"; from the U.S. Department of Agriculture for "Analysis of the Ecology and Aesthetic Desirability of Turfgrass as a Function of Management Intensity"; from the U.S. Environmental Protection Agency for a study of "Submerged Aquatic Vascular Plant Populations in Chesapeake Bay: Relationship to Shading Factors and Herbicides"; from the National Science Foundation for "Field Trips for Science Learning"; and from the Maryland Department of Agriculture for a study on "The Impact of Open Marsh Water Management on the Ecology of Chesapeake Bay High Marsh Vegetation."

The level of grant funding is expected to decrease as a result of the loss of several Environmental Protection Agency grants.

NATIONAL ZOOLOGICAL PARK

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	325	7,584	-	33	3	51	1	96	5	91
FY 1979 Base	324	7,954	-	42	3	28	-	52	3	70
FY 1980 Estimate	324	8,177	-	42	3	30	-	54	3	78

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	324	0	324
Number of Other Positions.....	27	0	27
11 Personnel Compensation.....	6,064	144	6,208
12 Personnel Benefits.....	594	14	608
21 Travel & Trans. of Persons....	27		27
22 Transportation of Things.....	9		9
23 Rent, Comm. & Utilities.....	95		95
24 Printing and Reproduction.....	24		24
25 Other Services.....	139		139
26 Supplies and Materials.....	758	50	808
31 Equipment.....	213	15	228
Acquisitions for collections.	29		29
42 Insur. Claims & Indem.....	2		2
TOTAL	7,954	223	8,177

Analysis of Change

Necessary Pay.....	158
Program Funds.....	65

ABSTRACT - The National Zoological Park (NZP), established by Congress in 1890, maintains a large and varied animal collection for exhibition and study. The Zoo serves the informational and educational needs of the public and conducts research, conservation and animal health programs on 150 acres in Washington's Rock Creek Valley and on a 3,150-acre Conservation and Research Center near Front Royal, Virginia. For FY 1980, a net increase of $65,000 is requested. An additional $77,000 is needed for the purchase of essential supplies and equipment for recently opened new facilities and for the Great Ape House now under construction. The proposed increase is offset by a reduction of $12,000 as a result of higher productivity of the office of graphics and exhibits. Necessary pay in the amount of $158,000 is required for existing staff.

PROGRAM - The National Zoological Park maintains a live collection in the Rock Creek facilities of approximately 2,000 animals comprising 430 species. Species are selected for their potential for exhibition and education as well as for basic research activities including the conservation of endangered species. Exhibits are grouped taxonomically to show variety of physiology, behavior and evolution and are designed to place animals in an environment as similar as possible to their natural habitats. There are also over 200 animals, comprising approximately 31 species, at the Conservation and Research Center at Front Royal, Virginia. Selection of these animals is made after careful consideration by a committee of Zoo scientists and veterinarians utilizing criteria which would best provide for long-term breeding of animals whose natural habitat is threatened or endangered. In addition, some species are chosen because the present captive populations are small or unstable or because of special difficulties in propagation due to habitat setting. These animals, maintained in herds or in the appropriate social groupings for their species, are ideally suited for research to improve husbandry and increase the knowledge of behavior, social organization and other aspects of biology.

Animal Management--The long-range objective of the National Zoo is the continuing development of a stable, self-sustaining collection. The Zoo staff of keepers, curators, veterinarians, researchers and support personnel work towards the goal of improving the health and longevity of captive animals. Continued monitoring, observation and research of the animals help to develop insight and information on proper conditions for reproduction and dietary health. Animal management and research results are shared with many other American zoos in a national effort to preserve irreplaceable exotic species, many of which are threatened with extinction in the wild.

The new Polar and Grizzly Bear Exhibits, which opened in FY 1978, and Beaver Valley, a complex for sea lions, grey seals, beaver and otter housed in a semi-natural setting, represent the most recent major efforts toward facilities for management, exhibition and education. These facilities provide greatly improved and enlarged homes for the animals as well as underwater viewing areas for enhanced visitor viewing.

The successful breeding programs for many species have been extremely heartening. The 100th golden lion marmoset was born this last year in the Zoo, marking a turning point in the Zoo's captive management program for this rare and endangered species. The first second-generation birth of an orangutan in captivity marked a milestone in the progress towards sustained, captive propagation of this species.

Increasingly, surplus specimens have been sent out on breeding loans to other zoos. The breeding loan process has been extremely successful for it allows the NZP and other zoos to maintain accurate records of the relationship of specimens to one another and thereby avoid problems of inbreeding. Over 20 golden lion marmosets were sent to sister institutions from the National Zoological Park. These loans have diversified the world-wide attempt to propagate this rare and endangered species in captivity and have allowed the Zoo to become one of the leaders in marmoset reproduction. A volume was published in the past year, entitled "The Biology and Conservation of the Callitrichidae," which resulted from a conference held at Front Royal aimed at summarizing knowledge concerning the biology of marmosets in the wild and their propagation in captivity. The conference was attended by representatives from Europe, South America and the United States.

Visitors--The success of "Zoolab," an innovative educational center, located in the main administration building, which permits visitors to have direct contact with materials associated with the collections, has lead to the development of a smaller sub-unit in the Bird House. "Birdlab," as it is called, gives visitors the opportunity to examine with proper guidance eggs, feathers and skeletons. Planning is underway for a similar unit in the Reptile House. The "Zoo Express Bus," which brings school children from the Metropolitan area for several visits to complement classroom instruction, has proven to be extremely successful. A second bus has been added and the program has been expanded accordingly.

Research--The National Zoo conducts diverse activities to gain understanding of the zoology of rare and endangered animals. Over 70 research projects are currently underway at the National Zoological Park and the Front Royal Conservation Center. Projects range from analyses of the relationship of a mother to her young in the newborn of the hoofed stock species to a long-term study of the breeding biology of the rare and endangered Pere David's deer. This past year a workshop was held to address itself to the problem of captive propagation of Pere David's deer. All specimens of this rare species exist today only in captivity. It has been extinct in the wild of its native China since before the 15th century.

A three-year study of offspring/parent interaction in the golden lion marmoset led to the discovery that if young marmosets are separated too early from their parents, they will not learn the appropriate parental care patterns. To ensure their own captive breeding success they must participate in parental care by remaining with their parents through the birth and and rearing of their young siblings. Such information is vital to the design of captive propagation programs for rare and endangered species.

Improved techniques in the use of the laparascope have permitted NZP veterinarians to pinpoint the time of ovulation in the cheetah. Such information is critical to the timing of reproductive encounters and could prove pivotal in breeding programs for rare felines.

Some of the research programs involve work in the field. In this past year, infanticide has been analyzed in a wild population of red howler monkeys. The circumstances under which infanticide occurs and the ecological features that promote infanticide are of great interest theoretically and also of great value to captive propagation programs. The role that mammals occupy in an ecosystem and the complex interactions shown in the wild are all necessary data that can be integrated with our captive studies in order to develop continuing expertise in the propagation and exhibition of exotic species.

In the area of health care, successful internship programs have been established in conjunction with the animal health unit and the office of pathology. Reflecting the leadership of the zoo in animal health and pathology, a symposium on the comparative pathology of zoo animals was held at the National Zoological Park which provided a lively forum for information exchange.

EXPLANATION OF PROGRAM CHANGE - The completion of new facilities, including the exhibits for polar and grizzy bears in FY 1978, the new exhibits for beavers, river otters, seals and sea lions scheduled for opening in FY 1979, and the Great Ape House scheduled to be completed early in FY 1980, necessitates additional funding for supplies and equipment. An amount of $77,000 is requested for the purchase of animal food, medical supplies and drugs, chemicals for the water filtration systems, and small pieces of equipment needed for food preparation at new locations. Offsetting this proposed increase will be savings of $12,000 anticipated as a result of increased productivity of the office of graphics and exhibits. The relocation of that office to enlarged space in the General Services Building coupled with the purchase of new graphics equipment has given the Zoo the capability to complete many projects on-site as opposed to the more costly alternative of contracting the work out to private firms.

To meet the need for two new animal keepers and one additional utilities repairer position required for the new facilities, the Zoo is relinquishing three positions: a secretary, a laborer and a pipe-fitter.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds are derived from a variety of sources including user fees for use of quarters and conference space by staff and authorized visitors and from allotments. The funds are used to provide necessary items for the security of the buildings at the Conservation and Research Center;

for the purchase of equipment and supplies needed to operate the classrooms and the auditorium of the Education and Administration Building; and for the costs of special events for the openings of new exhibits.

Restricted Funds--The Zoo receives a number of gifts, private foundations grants, and restricted endowments to support specific zoological research projects. For example, the Noble Foundation has donated funds to support behavioral and pasture research at the Conservation and Research Center at Front Royal, Virginia. It is anticipated that this grant will continue in FY 1980.

An estimated amount of $30,000 for FY 1979 and FY 1980 from the Zoo Private Animal fund will be used for the purchase of animals for the collection and to enable the Zoo to improve the conditions of the existing collection through research.

Federal Grants and Contracts--The funds are provided by various government agencies and departments for research projects being conducted by staff members at the Zoo and other locations. For example, the Zoo is currently conducting research on the social and reproductive behavior of marmosets with a grant from the National Institute of Mental Health ($38,000 projected expenditures in FY 1979). A three-year grant (expiring in FY 1979) from the National Science Foundation is being used to study macaques in Sri Lanka ($36,000).

CENTER FOR THE STUDY OF MAN

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	15	843	-	3	-	-	-	15	1	62
FY 1979 Base	7	579	-	2	-	-	2	86	-	73
FY 1980 Estimate	7	586	-	-	-	-	-	119	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	7	0	7
Number of Other Positions.....	11	0	11
11 Personnel Compensation.....	295	-19	276
12 Personnel Benefits.....	27	-1	26
21 Travel & Trans. of Persons...	54		54
22 Transportation of Things.....	10	1	11
23 Rent, Comm. & Utilities.....	4	2	6
24 Printing and Reproduction....		1	1
25 Other Services.....	70	21	91
26 Supplies and Materials.....	49	1	50
31 Equipment.....	70	1	71
TOTAL	579	7	586

Analysis of Change

Necessary Pay.....	7
Program Funds.....	0

ABSTRACT - The Center for the Study of Man's (CSM) anthropological and human science programs include the National Anthropological Film Center and the Research Institute on Immigration and Ethnic Studies. No program increase is requested for FY 1980. Necessary pay in the amount of $7,000 is required for existing staff.

PROGRAM - The Center for the Study of Man coordinates research and development of a series of anthropological and human science projects. The National Anthropological Film Center (NAFC) was established to take fuller advantage of the scholarly potential of film as a tool of inquiry into the vanishing and changing ways of life and cultures of the world. Its purpose is to facilitate the study, documentation and presentation of visual data records of the varieties of patterns of human behavior and response which have evolved in the world. As part of its mandate to continue inquiry into the nature of the human condition, the Center is exploring several research areas:

--A new genre of educational film for public distribution was inaugurated in FY 1979 in an experimental co-production effort with the National Film Board of Canada. Working with the scholarly film resources prepared by the NAFC, three educational films have been co-produced depicting aspects of the way of life of the Pashtoon Nomads of Afghanistan. This has been a pioneering effort to prepare more accurate and informative films on aspects of the human condition by retaining control of the film's content in the hands of the scholars.

--With a personal invitation from the Dalai Lama and cooperation from the Government of India, the NAFC had the unique opportunity to begin a research film study of a traditional Tibetan Buddhist monastery still carrying on the ancient practices. The NAFC plans to continue with this project in the coming year. On the south side of the Himalayan chain in Nepal, NAFC cinematographers, in collaboration with the prestigious Royal Nepal Academy, have moved into selected Jyapu Villages in search of remaining evidence of the once flourishing Newar civilization. These Jyapu Villages are a last representative of a very early type of refined agricultural and human organization which differs markedly from other peasant communities of the world.

--Following highly successful survey efforts, an NAFC cinematographer has begun work in a tiny village in the Western Sepik region of Papua New Guinea where isolation has allowed these people to maintain their traditional lifeways. This research film study is expected to become a very important contribution to NAFC's world ethnographic film sample.

--The original Polynesian cultures of the Pacific no longer exist; only elements live on. In the Cook Islands, performance traditions stemming from the original culture are still presented. With an invitation from the Premier of the Cook Islands, the NAFC assembled a research filming team in an attempt to capture this last aspect of the once great Polynesian culture before it disappears. This material is now being assembled for entry into the world ethnographic film sample.

--In order to obtain high quality synchronous sound-visual data records of daily life activity in remote cultures, the NAFC developed the design specifications for a rig which can be operated by a single person. This equipment surpasses existing camera technology by enabling cinematographers to remain as unobtrusive as possible while filming.

The Research Institute on Immigration and Ethnic Studies (RIIES) was founded with the general objective of stimulating, facilitating, disseminating, and when necessary, conducting and advising on research of immigration to the United States and its territories as it relates to ethnicity, development, international relations, cultural pluralism, and other related areas. There have been two major areas of interest which are being pursued: accumulation of knowledge on immigration to the United States since the passage of the 1965 Immigration Act; and the use of this knowledge to develop data and material for possible future museum exhibits. Multi-disciplinary approaches are being applied to gain a more complete understanding of the new immigrants, their experiences, challenges and impacts on the future of this society and the international community.

RIIES has carried out a number of crucial projects dealing with the new immigration including: (1) field studies in Washington, D.C., and other important centers with concentrations of new immigrants; (2) field studies of special cases/types of immigrants, including refugees and migrants; (3) a series of seminars, sometimes in collaboration with other Institution units and organizations, on the new immigrations; and (4) the country's first and only major conference on the new immigration involving national and international scholars, as part of the Institution's Bicentennial observance activities.

Other activities include the hosting of predoctoral fellows; the giving of lectures, courses and seminars at various schools, universities and colleges in the country; the development of an inter-agency group on immigrations; and the establishment of graduate training doctoral programs at Duke University and The State University of New York at Binghamton on the study of immigration. Proceedings, commissioned works and staff reports on new immigration

have been published and distributed to academic institutions and individuals for use as research tools. These publications include three series publications, bibliographic studies, research notes, a special issue of Society magazine, and a monograph, still in preparation, on Latin American immigrants in Washington, D.C. Additional works to be completed by the end of FY 1979 are the proceedings and bibliographies of RIIES seminars and a collection of selected articles recently acquired on minority and ethnic affairs. Scheduled for FY 1980 is the publication of a volume of articles on the new immigration for classroom use.

In FY 1980, the Institute's research efforts will begin to focus on the study of comparative historical immigration from the Caribbean to the American mainland and, by extension, into former U.S. overseas territories. Field research will be conducted in several Caribbean Islands, the Canal Zone, and major United States cities. With the Treaty negotiations now just terminated, it is imperative that certain field work be carried out to capture some features of Canal Zone populations that will not be likely to persist after the implementation of the Treaty. The project is expected to last approximately six years. In connection with this research, two seminar series are planned: one on "Comparative History of Black Immigration" and another entitled "Ethnicity and Culture in United States Territories." A publication and exhibit program associated with these seminars is planned.

In FY 1979, the Handbook of North American Indians project, formerly included in this heading, was transferred to the National Museum of Natural History.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--The Research Institute on Immigration and Ethnic Studies has received a small allotment to purchase basic reference materials needed to support research studies. Further support of this nature is not anticipated for FY 1980.

Restricted Funds--These funds are provided through gifts and foundation grants to support research conducted by the Center. For example, the Research Institute on Immigration and Ethnic Studies has received a Ford Foundation grant (projected FY 1979 expenditures of $35,000) to continue a research project,"Ethnic Conflict in Developing Countries." The National Anthropological Film Center has received various grants from foundations and individuals as well as an grant from the Smithsonian Women's Committee for specific film documentation and research projects.

Federal Grants and Contracts--In the past, the major source of funding has been Federal grants from the National Endowment for the Arts. Beginning in FY 1979, new funding from these sources has not been available. All funds from prior grants will be expended fully in FY 1979.

HISTORY AND ART

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	612	15,121	12	581	3	369	46	2,850	7	206
FY 1979 Base	644	16,502	13	594	1	331	48	2,761	1	104
FY 1980 Estimate	645	17,494	13	465	1	366	61	3,375	1	44

*FTP = Full-time permanent positions

Analysis of Change (Federal Request)

Necessary Pay..... 313,000
Program Funds..... 679,000

The FY 1979 base for all units in the History and Art Activity totals 644 positions and $16,502,000. A net program increase of one position and $679,000 is sought for FY 1980, consisting of program increases of seven positions and $754,000 offset by a reduction of six positions and $75,000. Included in the proposed increase is an amount of $350,000 to annualize the estimated operating costs of the Museum of African Art for which a supplemental request has been submitted to the Congress. Thus, the effective net program increase for the History and Art Activity totals $329,000. An amount of $313,000 is required for necessary pay.

Of the increase requested, $404,000 is designated for collections management programs, an Institutional priority for FY 1980. These funds will be used to provide additional base resources to support continuing collections management programs at the National Museum of History and Technology and the Cooper-Hewitt Museum; to enhance the conservation activities at the National Museum of History and Technology, National Collection of Fine Arts, and National Portrait Gallery; to enable the Archives of American Art to continue to work with state groups with a view toward locating, preserving and microfilming local art-related records; to reinforce the art handling capability of the Hirshhorn Museum and Sculpture Garden; to purchase specialized collections management and collections storage equipment at several of the museums; and to provide some additional clerical support for registrarial work.

These requested increases in funds are offset by reductions of $75,000 in base resources that are currently designated for exhibition and education programs at the National Museum of History and Technology and the National Portrait Gallery.

The sources and uses of non-appropriated Trust funds are explained individually for each line-item in the History and Art Activity.

OFFICE OF THE ASSISTANT SECRETARY FOR HISTORY AND ART

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	8	243	1	77	-	2	-	1	2	49
FY 1979 Base	9	288	1	63	-	20	-	1	1	18
FY 1980 Estimate	9	303	1	63	-	1	-	1	1	19

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	9	0	9
Number of Other Positions.....	0	1	1
11 Personnel Compensation.....	252	14	266
12 Personnel Benefits.....	25	1	26
21 Travel & Trans. of Persons....	7		7
25 Other Services.....	2		2
26 Supplies and Materials.....	2		2
TOTAL	288	15	303

Analysis of Change

Necessary Pay.....	9
Program Funds.....	6

ABSTRACT - The Office of the Assistant Secretary for History and Art advises and assists the Secretary in planning, implementing and reviewing the activities of the Smithsonian history and art programs. Also included under this heading is the Joseph Henry Papers project. To provide clerical assistance to the Joseph Henry Papers project, a program increase of $6,000 is sought for FY 1980. Neccessary pay in the amount of $9,000 is required for existing staff.

PROGRAM - I. Immediate Office: With a base of four positions and $139,000, the Office of the Assistant Secretary for History and Art advises and assists the Secretary in planning, implementing, coordinating and reviewing the progress of the Smithsonian history and art bureaus and offices. The bureaus and offices reporting directly to the Assistant Secretary for History and Art are the Archives of American Art, Cooper-Hewitt Museum of Decorative Arts and Design, Freer Gallery of Art, Hirshhorn Museum and Sculpture Garden, National Collection of Fine Arts, National Museum of History and Technology, National Portrait Gallery, Office of American Studies and Folklife Programs, and the Joseph Henry Papers. The Museum of African Art will also report to the Assistant Secretary for History and Art.

II. Joseph Henry Papers: The remainder of the resources identified in the base for this office, five positions and $149,000, supports the Joseph Henry Papers project. The Editor of the Joseph Henry Papers and his staff have been gathering and preparing for publication the manuscripts of Joseph Henry (1797-1878), the pioneer American physicist and first Secretary of the Smithsonian Institution. Two volumes of the multi-volume letterpress series have been published by the Smithsonian Institution Press, and a third volume will appear in the spring of 1979. In FY 1980, a fourth volume of the series and a special volume of Henry's public lectures are scheduled for publication, and editorial work on a fifth volume of manuscripts will begin. In addition, work continues on the supplementary microfilm edition.

EXPLANATION OF PROGRAM CHANGE - An increase of $6,000 is sought to hire part-time clerical assistance for the Joseph Henry Papers. One of the major bottlenecks in publishing earlier volumes of The Papers of Joseph Henry has been the large amount of typing, including the manuscript, a task which the office administrator has undertaken in addition to assigned normal responsibilities. The addition of temporary clerical assistance on an "as-needed" basis should enable the project to proceed without delay because of a shortage of typing availability.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds are derived from several sources, including allotments and royalties received from the sale of the Bicentennial Portfolio Series. For FY 1979 and FY 1980, $63,000 of unrestricted general funds will be used to pay the salary, benefits, travel and other costs of the Assistant Secretary for History and Art incurred while conducting official Smithsonian business. In FY 1979, $52,000 of unrestricted general funds will be used to begin surveys of the decorative arts collection and the prints and drawings collections in all Smithsonian museums. The funds are managed by the Assistant Secretary for History and Art; however, because allocations have been made to the National Collection of Fine Arts (a survey on decorative arts) and National Museum of History and Technology (a survey on prints and drawings) the dollar figures appear under the unrestricted Trust funds of those museums. Centrally available information about these collections will improve their usefulness, not only to Smithsonian staff, but to outside scholars and the interested public, as well as permitting a more rational plan of acquisitions to be developed. In FY 1980, another $50,000 will be required to continue these surveys. The results will be published in finders' guides to the collections; the printing costs will be financed with $20,000 of special purpose funds.

Restricted Funds--In FY 1979 and FY 1980, $1,000 from the National Academy of Sciences will help to defray the costs of publishing the Joseph Henry Papers.

Federal Grants and Contracts--Grants of $18,000 in FY 1979 and of $19,000 in FY 1980 from the National Historical Publications and Records Commission will be used by the Joseph Henry Papers to support one full-time position.

NATIONAL MUSEUM OF HISTORY AND TECHNOLOGY

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	274	6,405	-	10	2	243	1	501	2	25
FY 1979 Base	274	6,702	-	36	1	200	-	349	-	25
FY 1980 Estimate	278	6,984	-	12	1	232	1	336	-	25

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	274	4	278
Number of Other Positions.....	18	2	20
11 Personnel Compensation.....	5,350	179	5,529
12 Personnel Benefits.....	524	18	542
21 Travel & Trans. of Persons....	35	6	41
22 Transportation of Things.....	30		30
23 Rent, Comm. & Utilities.....	35		35
24 Printing and Reproduction.....	68	-6	62
25 Other Services.....	300	30	330
26 Supplies and Materials.....	136	23	159
31 Equipment.....	144	32	176
Acquisitions for collections.	80		80
TOTAL	6,702	282	6,984

Analysis of Change

Necessary Pay.....	126
Program Funds.....	156

ABSTRACT - The National Museum of History and Technology (NMHT) collects, preserves and studies the material objects which document American cultural and technological history. The FY 1980 budget reflects the Museum's resolve to continue efforts initiated during FY 1979 toward strengthening collections management programs. For FY 1980, a net increase of four positions and $156,000 is requested. Two additional technician positions and $101,000 are sought to accelerate the task of gaining more effective control of collections; and two new positions and $105,000 are requested for conservation and associated laboratory supplies to strengthen the Museum's essential work in preserving rare and valuable specimens. To offset these requests, a decrease of $50,000 is recommended in the area of exhibits maintenance; fewer and less costly exhibits will be produced during FY 1979. The proposed net increase will offset almost completely the program decrease sustained by the NMHT at Smithsonian recommendation in FY 1979, a year of major reemphasis in the Museum's budget. It was in FY 1979 that the new collections management effort was initiated. Necessary pay in the amount of $126,000 is required for existing staff.

PROGRAM - Collections management has been given highest priority among the Museum's programs. Inventory of the 15 million objects in the collections, begun in FY 1978, will have been completed in three of the Museum's 21 curatorial divisions by the end of FY 1979. Inventories of eight more divisions will be completed by the end of FY 1980. Data produced by the inventory team will be organized by computer into a standardized retrieval system for all objects. To complement this effort, the Museum has continued to develop its system of standardized storage. During 1978, NMHT acquired an additional building at the Smithsonian storage facility in Silver Hill, Maryland. Plans call for conversion of this building into a high-quality storage area as a first step toward improving all of the Museum's Silver Hill storage space. Security of the collections storage areas at the NMHT is also being improved with the phased purchase of an electric card access system. The responsibility for managing all aspects of the collections management program will be given to a collections manager, to be hired on a term appointment in FY 1979.

The Museum maintains an active exhibits program, although the rapid pace at which the program had grown is being slowed to permit more attention to the vitally important collections management program now underway. The exhibits department was reorganized in September, 1978 to create a new exhibits management division with the responsibility for maintaining and upgrading the permanent exhibits at NMHT. To further strengthen exhibits management, a master plan and a schedule for new exhibitions for the next five years have been developed. The Museum opened two major exhibits during FY 1978. "Atom Smashers: Fifty Years" is the first exhibit in the country to assemble historical high-energy particle accelerators, the machines used to explore the inner workings of the atom. The "Hall of American Maritime Enterprise," the largest exhibit produced by the Museum's design and production staff in many years, is an historical introduction to two centuries of commercial shipping in America. In it, one can find the oldest surviving steam engine in America, the entire engine room (actually running) of a 1920's Coast Guard buoy tender, and a fully outfitted whaleboat from one of America's last square-rigged whaling ships. Both exhibits are products of several years of preparation and together they cover over 20,000 square feet of the Museum's first floor. Other exhibits produced during FY 1978 were "Focusing on America" which featured rare hand-colored maps of the New World, "Aspects of Art and Science" which illustrated the continual collaboration between the sciences and art, and "Women in Science," describing the contribution of women to 19th century scientific discovery.

A major exhibit in FY 1979 will celebrate the centennial of Einstein's birth, and another will commemorate Edison's invention of the lightbulb. Exhibits planned for FY 1980 include ancient scientific instruments; the whimsical technology of Rowland Emett; and "The Clockwork Universe," a large exhibition of Renaissance clocks and automata, which is being organized by NMHT in conjunction with the Bavarian National Museum. Substantial planning work will also be done in FY 1980 to complete the "Hall of Armed Forces History" and to prepare an exhibition commemorating the 250th anniversary of George Washington's birth. Both exhibitions are scheduled to open in FY 1981.

Among the important acquisitions of the Museum during 1978 were the inaugural ball gown worn by Mrs. Carter on January 20, 1977; the Chase Manhattan Bank's Money Museum collection; the Treasury Department's collection of United States paper currencies, encompassing the vast majority of U.S. paper money issued since 1861; and the highly signicant Remensnyder Collection of 155 brass and copper objects dating from the 18th and 19th centuries. The acquisitions program at NMHT has received new emphasis with the decision to commit the Museum's unrestricted Trust funds mainly to the purpose of acquiring important objects for the collections.

The Museum continues to give its research and publications program a high priority. Research by Museum staff resulted in the publication in FY 1978 of 16 books and 57 articles and scholarly papers. This important work will continue in FY 1979 and 1980. The Museum hosted a large variety of scholarly activities during FY 1978 including symposia, lecture series and the editing of several publications. "The Frank Nelson Doubleday Lectures" were dedicated this year to the human mind, and featured four leading authorities who have explored the nature and operation of the mind--Dr. Roger W. Sperry, Professor Marvin Minsky, Dr. J. B. Rhine and Dr. Rollo May. During FY 1979, the Doubleday Lectures will celebrate the centennial of Einstein's birth, with guest lecturers including C.P. Snow and Sir Karl Popper.

Besides serving the scholarly community, the Museum has developed and maintained, with the help of several hundred volunteers and docents, many other programs for the benefit of the four million people who visit every year. Besides special programs for the disabled, the Museum also has continued its highly successful film and concert series, its holiday festivities and other special efforts directed toward the general public.

EXPLANATION OF PROGRAM CHANGE - In FY 1980 an increase of two positions and $101,000 is requested for collections management needs, and two positions and $105,000 are requested for conservation needs. These increases will be offset by a decrease of $50,000 in exhibitions.

During FY 1979, the NMHT will have accelerated its efforts to inventory its collections in three of the Museum's 21 curatorial divisions by using redirected base resources as supplemented by a portion of the $500,000 appropriated by the Congress for FY 1979 for collections inventories throughout the Institution. Currently, the Museum's collections management base consists of 16 positions and $423,000. In FY 1980, collections management will continue to receive the highest priority for funds, especially to help compile additional data for entrance into the computer. Two new positions and $101,000 are requested to continue the long-term inventory program, currently the most critical part of the Museum's collections management activities. The proposed new resources will be used to gain more effective control over the collections of eight additional curatorial divisions and will fund a full-time computer specialist (a data transcriber), a museum technician, part-time personnel, computer services, supplies and equipment. Information for an estimated 200,000 objects will be compiled for entrance into the computer file system.

Increased support for the NMHT's effort toward the preservation and restoration of its collections is a natural consequence of its heightened emphasis on collections inventory. Recent surveys have focused attention on the many rare and valuable specimens too fragile to be handled safely or exhibited, or on those made of unstable materials and destined to deteriorate beyond hope of restoration if not treated by trained conservators. To carry out urgent conservation work, a division of conservation has been created. The new division, with resources totalling nine positions and $241,000, was organized by combining the former technical laboratory, the model shop and the musical instruments laboratory under a head conservator. For FY 1980 an additional two positions (paper and metal conservators) and $105,000 are requested. The new positions will be used in areas of most critical need: the preservation of documents and works of art on acidic and deteriorating paper and metals. In addition to supporting the proposed positions, the requested funds will be used for laboratory supplies and equipment for the conservation laboratory, and for contractual services for projects requiring equipment or skills not available in the Museum.

The requested increases are offset by a proposed savings of $50,000 in the area of exhibits maintenance. Fewer and less costly exhibits are planned for FY 1979.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds are derived from a variety of sources including the Museum's share of sales in the museum shop, restaurant and book store; from product development royalties; and from allotments. The funds are used for collection acquisitions, field research, publications and special events for the opening of new exhibits.

Restricted Funds--Funds provided here are in the form of restricted endowment accounts which always specify the use of the donation or bequest and of gifts provided by organizations or corporations for specific purposes. For example, over several years, the American Telephone and Telegraph Co. has provided funding for the "Person to Person" exhibit; the American Bank Association has provided funding for the "History of American Banking" exhibit; and the maritime community has provided, from individual and corporate donors, approximately $800,000 for the "Hall of American Maritime Enterprise." It is hoped that funding of this nature will continue through FY 1980.

Federal Grants and Contracts-- The Museum has received several small grants and contracts for support of exhibits and publications. It is anticipated that approximately the same level of funding will continue through FY 1980.

NATIONAL COLLECTION OF FINE ARTS

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	106	2,928	-	96	1	65	-	55	-	(5)
FY 1979 Base	106	3,108	-	67	-	78	-	85	-	-
FY 1980 Estimate	105	3,210	-	26	-	61	-	42	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	106	-1	105
Number of Other Positions.....	30	-6	24
11 Personnel Compensation.....	2,143	72	2,215
12 Personnel Benefits.....	211	8	219
21 Travel & Trans. of Persons....	28		28
22 Transportation of Things.....	114	2	116
23 Rent, Comm. & Utilities.....	16		16
24 Printing and Reproduction.....	75		75
25 Other Services.....	172		172
26 Supplies and Materials.....	93	6	99
31 Equipment.....	42	14	56
Acquisitions for collections.	200		200
41 Grants.....	14		14
TOTAL	3,108	102	3,210

Analysis of Change

Necessary Pay.....	58
Program Funds.....	44

ABSTRACT - The National Collection of Fine Arts (NCFA), the oldest national collection of art, is devoted to the acquisition, study, interpretation and exhibition of American painting, sculpture and graphic arts. The Renwick Gallery, a physically separate museum, displays crafts and decorative arts and design. For FY 1980, an increase of $44,000 is requested, consisting of: (1) $29,000 for a paper conservator and associated supplies and equipment (one presently authorized secretarial position will be reallocated to allow for the proposed new paper conservator position); and (2) $15,000 for collections management needs and storage equipment. In addition, one position will be eliminated in the office of program support. Necessary pay in the amount of $58,000 is required for existing staff.

PROGRAM - The NCFA's collection of over 23,000 works represents all aspects of over 200 years of American art, and serves as the basis for active programs of exhibition, research and public education. Its publications have become basic texts for reassessment of the art of America's past, and its exhibitions have brought new appreciation for American artists of both the past and the present. The museum has maintained close contact with art centers abroad and has encouraged the study of local art in many regions of the United States. Through the Renwick Gallery, opened in 1972 in a separate building, it has provided galleries for the exhibitions of decorative arts and crafts, as well as for the presentation of exhibitions from abroad. Many young professionals from the United States and other countries have conducted research, and learned methods of museum procedure and of public education through the NCFA's fellowship and intern programs. The NCFA also maintains the Barney Studio House (with a part-time curator paid from non-appropriated Trust funds) as a period home for its collection on the first two floors and as a residence for visiting scholars on the top two floors.

As a national center for the study and research of American art, the NCFA maintains two major art indexes: the Inventory of American Paintings Executed before 1914, which began as a Bicentennial project and now has over 200,000 items catalogued by computer, and the Smithsonian Art Index, which at present lists over 100,000 items of art from the Institution's non-art museums. In addition, NCFA has 57,000 slides and photographs on a computerized reference file and another 130,000 negative and slides yet to be entered on the computer data bank. The library, with 36,000 volumes serving not only the staff of the NCFA, the Archives of American Art and the National Portrait Gallery but also local and visiting scholars and students, answered by mail and telephone approximately 2,750 reference questions during FY 1978.

Educational activities at the NCFA include a number of innovative programs. In the past year, almost 400 secondary school students and their teachers participated in the "Discover Graphics" workshop at the museum, and another 3,000 participated in related workshops held in 28 schools. Approximately 3,500 persons attended the June 3, 1978, "Kaleidoscope Day," which was organized especially for families with children and which this year emphasized color and its relationship to design. During FY 1978, over 17,000 visitors were conducted through the NCFA and Renwick by 75 docents, and 25 workshops were organized for teachers and others at all educational levels. The NCFA annually guides about ten postgraduate fellows (some on Smithsonian fellowships) and 15 student interns in training programs, weekly seminars and individual research projects. Another 750 persons are given academic, vocational and scholarly counsel by telephone, correspondence or office conferences.

In its exhibition program, the NCFA will continue its emphasis on reexamining works by American artists who have been neglected in the past and on exploring regional aspects of American art. The Renwick will provide opportunities for the exhibition of work by American craftsmen, both in displays of works by individuals and in the presentation of new ideas, approaches and techniques of crafts media.

In FY 1979 NCFA will devote individual attention to the following American artists, both living and dead, in special exhibitions to reappraise their influence and their critical standing today: "William Penhallow Henderson, 1877-1943: An Artist of Sanfa Fe," "Collages by Irwin Kremen," "Gabor Peterdi: Forty-five Years of Printmaking," "Seymour Lipton: Aspects of Sculpture," and "The Art of Hugo Robus (1885-1964)." In FY 1980 exhibitions will feature the following American artists, whose work merits fresh attention: Saul Baizerman, Walter Quirt, David Gilmour Blythe and Jan Matulka. Preparation will be underway for a major exhibition of John Graham's work.

A major exhibition in FY 1979 which illuminates regional trends and aspects of American art will be "Western Arts," which will be juried by a member of the NCFA staff and by two members of the staffs of western art museums. The exhibit will include more than 70 contemporary paintings, works on paper, sculpture, and porcelain created by 28 artists in 13 western states. The show will open in Denver and then move to Washington.

Another exhibition to be organized by and shown at the NCFA in FY 1980 is "Sculpture of the Federal Triangle," which will examine the sculptural decoration on the Triangle's seven buildings and the 42 artists who designed and executed them. Some 210 objects, 53 sculptural models, 56 drawings, 89 photomurals and a major publication will provide definitive documentation for this important government project of the 1930's. Distributed in conjunction with the exhibition will be a free brochure which visitors may use for a self-guided tour of the Federal Triangle to view the sculpture displayed in the exhibition.

At the Renwick Gallery, exhibitions will provide a forum for the work of leading American craftsmen. The popular exhibition "The Harmonious Craft: American Musical Instruments" will continue through most of FY 1979. Organized jointly by the Renwick and the musical instruments division of the National Museum of History and Technology, the show surveys craftsmanship and design in over 100 traditional and innovative instruments. Demonstrations and live performances on these instruments have been made possible by grants from two private sources. During the remainder of FY 1979, shows will analyze the works of such individual craftsmen as Ronald Pearson, gold and silversmith; of Dale Chilhuly, glassmaker; and of Ofaf Scoogfors, jeweler. New ideas and approaches to traditional crafts media will be presented during FY 1979 in "Printed, Painted and Dyed: The Fabric Surface" and in "New Stained Glass." In FY 1980 similar crafts will be scrutinized from a different perspective in "Textile Techniques in Art" and in "New Glass."

The Renwick also serves as an important national showcase in which foreign countries can stage exhibitions, chiefly of native crafts and decorative arts. In FY 1979 such exhibitions will include "Clay Figures from Guerrero" and "Mexican Masks," both originated by the Mexican Government in conjunction with the "Mexico Today" symposium; "Bo'jou Neejee!: Profiles in Canadian Indian Art," organized by the National Museum of Man in Canada; and "The Art of Imperial Russia, 1800-1850," containing 150 paintings, graphics and decorative objects from the Hermitage and other Russian museums, few of which have been shown previously in the United States. In FY 1980 the Renwick will exhibit "Ryijy Rugs from Finland: 200 Years of a Textile Art" and "Belgian Puppets: Tradition and Techniques."

An acquisition of major importance to the NCFA's permanent collection during FY 1979 was Dover Plain, Dutchess County, New York, painted in 1848 by Asher B. Durand. The painting, a large and significant early work by Durand, fills a major gap in the museum's 19th century landscape collection. It was acquired through the generosity of a private donor and the Smithsonian's Trust fund collections acquisition program.

EXPLANATION OF PROGRAM CHANGE - In FY 1980 an increase of $44,000 will allow the museum to add a paper conservator to its staff and to provide collections management needs and storage equipment. The position for the proposed new conservator will be made available from within NCFA's authorized full-time permanent positions. In addition, one position will be eliminated in the office of program support.

To care for a collection of 23,000 works, the NCFA conservation laboratory operates with two painting conservators, one paper conservator, occasional contract conservators, and two or three rotating interns each year. By far the greatest part of the collection (14,000 objects) consists of works of art on paper. Much of the collection, which dates back more than 100 years, could not receive proper attention in the past. By the end of FY 1979 the laboratory will have finished its first complete survey of the condition of the collections, having by that same time stabilized their condition where necessary and arrested deterioration.

An increase of $29,000 is sought for a paper conservator who will assist the existing paper conservator in reducing the current backlog of prints and drawings requiring extended treatment and keeping pace with continuing demands and new acquisitions. A full-time permanent position will be reallocated within the museum for the conservator by substituting part-time secretarial assistance for a full-time secretary.

An additional $15,000 is requested in FY 1980 for collections storage needs. An amount of $5,000 is required to purchase and install metal storage racks and related equipment at the Smithsonian Service Center where storage space has recently been made available to the NCFA.

The remaining $10,000 will allow the museum to rebuild and enlarge shelving racks in the prints and drawing store room, to replace with proper casing old map storage cases used to house oversized works executed on paper, and to install special plexiglass panels in the gallery where prints and drawings are displayed. These panels are necessary to screen out ultra-violet rays which are harmful to light-sensitive prints and drawings.

Finally, one visual information specialist position in the office of program support will be relinquished in FY 1980. The activities of this office are being reduced systematically and its responsibilities have been transferred to other offices within the museum. The funding associated with this position now will support part-time personnel in the registrar's office which has assumed additional duties, and increased costs for the packing and shipping of works of art that are loaned or borrowed.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds are derived from many different sources, including the NCFA's share of museum shop sales, restaurant sales, and a small allotment. Among the other sources are: royalties received by staff members on official duty (such as lecturing and jurying exhibitions); participation fees from outside museums that receive on loan exhibitions organized by and initially shown at the NCFA; gifts from outside donors to support NCFA exhibits or purchases of works of art for the permanent collection; tuition reimbursements from universities for students who are accepted as interns at NCFA each fall and spring semester; sales of slides and photographs, and rental of transparencies to other organizations or individuals; and support from outside organizations for public programs in the museum that could not be funded otherwise.

These funds are used to support the cost of certain museum publications; purchase works of art which become available on the market; meet operating costs for additional programs (e.g., Renwick Gallery's "Master Craftsmen Series" of demonstrations received $5,000 in FY 1979); defray travel costs associated with meetings of the National Collection of Fine Arts Commission; cover the special expenses of curatorial staff members engaged in research related to the permanent collection; provide stipends for artist-apprentices in the "Discover Graphics" workshop ($6,000 estimated for FY 1979); provide stipends for summer interns in the professional training program; purchase photographic supplies needed to fill private orders for slides; and to supplement the funds for exhibition opening receptions and similar events.

Restricted Funds--These funds are given by individuals or corporations, or left as a bequest, for specific purposes. Such funds received by NCFA have generally been for a particular exhibition or collection. Among the largest are: the Laura Barney Trust (an estimated $15,000 in expenditures during FY 1979), which is used to maintain Barney Studio House and support its program; the Mobil Oil Fund (an estimated $14,000 in expenditures during FY 1979), which is for the research, preparation and circulation abroad of the exhibition "Images of an Era: The American Poster, 1945-1975"; a gift of $30,000 given in October 1979, by Doris M. Magowan/The Charles E. Merrill Trust for the strengthening and presentation of the NCFA miniature collection; and a gift of $30,000 from the Morris and Gwendolyn Cafritz Foundation to purchase The Old House Chamber, an historically and artistically important oil sketch by Samuel F.B. Morse, to be displayed in the Capitol.

NATIONAL PORTRAIT GALLERY

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	75	2,128	-	18	-	22	2	118	3	100
FY 1979 Base	78	2,301	-	78	-	20	2	96	-	-
FY 1980 Estimate	76	2,345	-	21	-	15	2	88	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	78	-2	76
Number of Other Positions.....	19	0	19
11 Personnel Compensation.....	1,514	29	1,543
12 Personnel Benefits.....	141	3	144
21 Travel & Trans. of Persons....	21		21
22 Transportation of Things.....	35		35
23 Rent, Comm. & Utilities.....	16		16
24 Printing and Reproduction.....	30		30
25 Other Services.....	122		122
26 Supplies and Materials.....	72	3	75
31 Equipment.....	50	9	59
Acquisitions for collections.	300		300
TOTAL	2,301	44	2,345

Analysis of Change

Necessary Pay.....	44
Program Funds.....	0

ABSTRACT - The National Portrait Gallery (NPG) was established by Act of Congress in 1962 (20 U.S.C. 75b) as a museum for the exhibition and study of portraits depicting men and women who have made significant contributions to the history, development and culture of the people of the United States. In FY 1980, a net decrease of two positions can be accommodated. An exhibits technician position is being relinquished as a result of reassigning workloads. By substitution of part-time and temporary janitorial services during peak workload periods, it also will be possible to give up a full-time janitorial position. An amount of $25,000 will be redirected from the Gallery's education program in support of collections management efforts. Necessary pay in the amount of $44,000 is required for existing staff.

PROGRAM - The National Portrait Gallery is the only national museum that depicts the history of the United States in terms of the men and women who made that history. The portraits of these individuals are crucial documents of historical evidence and bear strong witness to the roles they played in the American experience.

The Gallery's activities include: the expansion and care of its collections; public education through display of these collections and specially organized temporary exhibitions; the preparation and national distribution of scholarly and popular publications; and the compilation of a definitive catalogue of American portraits, a unique information resource of American history and biography, art and iconography.

During FY 1978, 1,474 portraits were added to the collections, including 914 original art works produced for "Time" magazine covers over the past quarter century presented by Time, Inc. Of the remaining 560 items acquired, 92 came by gift, the most noteworthy being the Anders Zorn portrait of President Grover Cleveland donated by a descendant of the subject. Especially worthy of mention among portraits purchased are an oil of President Millard Fillmore as a young man by an unidentified artist, and a self-portrait of the 19th century American painter William Page. Significant purchases for the Gallery's collection of photographs include a daguerreotype of John C. Calhoun and an ambrotype of John C. Fremont.

In FY 1978 the Gallery mounted 13 special exhibitions and opened a room devoted to the portrait sculpture of Jo Davidson, which celebrated the gift to the Gallery of 25 Davidsons (bringing the Gallery's present holdings of this artist's work to a total of 43). The two largest and most important exhibitions of the year were "The Time of Our Lives," consisting of approximately 100 paintings, sculptures, and photographs selected from a collection of originals for "Time" magazine covers; and "Facing the Light: Historic American Portrait Daguerreotypes," which contained 110 items from the Gallery's permanent collection and from institutions and private collections throughout the country. Among the other exhibitions held at the Gallery were: "Perry in Japan," about America's first encounter with that Asian nation in 1853; "Jay Gould: Mephistopheles of Wall Street," which in addition to many portraits included objects of various kinds relating to Gould and his personal life and business career; "Helen Keller and Anne Sullivan Macy," the centerpieces of which were the Gallery's life masks of these two extraordinary individuals; and "Adalbert Volck: Fifth Column Artist," featuring a man whose cartoons and caricatures served the cause of the Confederacy.

A fully illustrated catalogue "Facing the Light: Historic American Portrait Daguerreotypes" was published by the Smithsonian Institution Press. In addition to biographical essays of subjects whose daguerreotypes were displayed in the exhibitions, the catalogue also listed and illustrated all other known daguerreotypes of these individuals. A catalogue that included illustrations of all 43 of Jo Davidson's portrait sculptures was produced as well. As part of the celebration of the 10th anniversary of the National Portrait Gallery's opening in the fall of 1968, the Gallery issued through the Smithsonian Press "Fifty American Faces," a volume of essays dealing with a cross-section of the permanent collection; and the first "Illustrated Checklist of the Permanent Collection," a publication which will be brought up to date every two years.

The Gallery's inaugural self-portrait lecture series had four speakers in FY 1978. Three contemporary portrait photographers spoke in conjunction with the exhibition "Facing the Light." As part of NPG's anniversary celebration, a symposium on the art of biography was held in November, 1978. Papers given will be published in the spring of 1979 under the title Telling Lives. The self-portrait lecture series will continue in FY 1979 and FY 1980.

During FY 1979 and FY 1980 the Gallery has scheduled several major exhibitions to be accompanied by catalogues, as well as independent publications, and various lecture series. "Return to Albion: Americans in England, 1760-1940" will open in April, 1979. Its catalogue with an introduction by Alistair Cooke will be published in book form. The work of an artist painting in America in the late 18th century will be the subject of an exhibition entitled "The American Portraits of Robert Edge Pine." In the spring of 1980 the Gallery will mount an exhibition of American portrait drawing from the 18th century to the present; and in the fall of that year a show and catalogue devoted to the American students of Benjamin West will be organized.

Publications independent of exhibitions scheduled to appear during this period are: "A Gallery of Presidents," based on the National Portrait Gallery's Presidential portraits; a definitive catalogue of the portrait engravings of C.B.J.F. de Saint-Memin and a catalogue of all known 18th century American portrait prints.

During FY 1979 the Charles Willson Peale Papers will be published in a definitive microfiche edition, including over 39,000 images. In addition, the first volume of the letter-press series of the Papers entitled "Charles Willson Peale: The Early Years," is scheduled to to be published in 1980.

The national survey for the Gallery's "Catalogue of American Portraits" commenced in August, 1978. It is projected to encompass a period of seven years and is funded in part by the Andrew W. Mellon Foundation. The holdings of 40 institutions have already been surveyed and more than 1,400 records made.

EXPLANATION OF PROGRAM CHANGE - For FY 1980, a net decrease of two positions is recommended. By using part-time and temporary maintenance staff in times of heavy visitation, it will be possible to relinquish a full-time janitorial position. In addition, with a reassignment of workload, a position in the exhibits department can be given up. The funds associated with this position are urgently needed for a part-time technician to assist in the matting and framing of prints and photographs. The one full-time framer can no longer keep pace with steadily increasing demands in connection with new acquisitions and exhibitions let alone perform needed frame restoration.

Further, an amount of $25,000 will be redirected from the education program to collections management purposes. Savings are anticipated through workload consolidation and discontinuance of a portrait workshop conducted for high school art students. These funds will be used as follows: (1) to remat and reglaze (using unbreakable and ultraviolet resistant plexiglass) most of the 914 original "Time" magazine covers to assure their preservation and to make them available for loan and circulation exhibitions ($6,000); (2) to purchase metal storage cabinets for the exhibits preparation room and storage areas used by the registrar and the curators of prints and photographs. These units will replace outmoded wooden equipment and accommodate borrowed items of great value while being prepared for exhibition, and be used for storage of the Gallery's greatly expanding collections of prints and photographs (452 portraits in these media were added in FY 1978 alone, exclusive of those in the "Time" collection) ($9,000); and (3) to hire urgently needed part-time registrarial assistance to keep records and perform administrative tasks in connection with collections and exhibitions ($10,000). The Gallery's collections have more than doubled in the past three years, and the current workload far exceeds the capacity of the two positions presently in the office of the registrar.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--Funds are derived from a variety of sources including the museum's share of sales in the museum shop and restaurant, publication contracts, sales of photographic reproductions of the collections, individual contributions made for discretionary use, honoraria paid to staff, and allotments. These funds support public lectures, special events held in connection with the opening of new exhibits, travel costs associated with meetings of the National Portrait Gallery Commission, replacement of restaurant equipment, urgent printing tasks, and photographic and other expenses in support of staff lectures.

Restricted Funds--Funds are provided from gifts by private foundations and individuals for a particular project or acquisition. For example, the Andrew Mellon Foundation provided a multi-year grant of $340,000 for a nationwide survey to produce a catalogue of American portraits, $41,000 of which is being expended during FY 1979. An additional $52,000 will be raised for this project in the states as they are surveyed. A private donation of $15,000 for the acquisition of a portrait of Marianne Moore and several gifts totalling $24,000 were made in

commemoration of Gallery's 10th anniversary. Although funding of this nature is difficult to project beyond the current year, it is anticipated to remain at the same level as in previous years.

Federal Grants and Contracts--Having received in FY 1979 appropriations to support the editing of the Charles Willson Peale Papers, the Gallery has terminated its grant from the National Endowment for the Humanities. The Gallery has no other Federal grants or contracts.

HIRSHHORN MUSEUM AND SCULPTURE GARDEN

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	83	2,034	-	17	-	15	-	19	-	-
FY 1979 Base	80	2,121	-	50	-	13	-	108	-	-
FY 1980 Estimate	80	2,184	-	23	-	57	-	350	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	80	0	80
Number of Other Positions.....	1	2	3
11 Personnel Compensation.....	1,386	45	1,431
12 Personnel Benefits.....	135	4	139
21 Travel & Trans. of Persons...	12	2	14
22 Transportation of Things.....	35		35
23 Rent, Comm. & Utilities.....	14		14
24 Printing and Reproduction....	60		60
25 Other Services.....	143	4	147
26 Supplies and Materials.....	72	-2	70
31 Equipment.....	40	10	50
Acquisitions for collections	218		218
41 Grants.....	6		6
TOTAL	2,121	63	2,184
Analysis of Change			
Necessary Pay.....		39	
Program Funds.....		24	

ABSTRACT - Established by Act of Congress (P.L. 89-788, November 7, 1966), the Hirshhorn Museum and Sculpture Garden (HMSG), a major museum of contemporary art, maintains an active program of exhibitions drawing from its own and other collections. The Museum also prepares catalogues and operates educational activities, including film programs, lectures, concerts, publications and tours, as well as conducts research along with publication in the field of modern art. Technical and support units include offices of conservation, registration, photography, and a reference library. For FY 1980, an increase of $24,000 is requested for collections management activities. Necessary pay in the amount of $39,000 is required for existing staff.

PROGRAM - As one of the few major museums of contemporary art in this country, the Hirshhorn Museum and Sculpture Garden maintains an active exhibits program along with related programs of lectures, films, concerts and educational activities involving audiences of all ages.

The Museum is concentrating on exhibitions drawn from works within its own collection, and of the 11 exhibitions mounted in FY 1978, produced six. Original exhibitions planned in FY 1979 include: "Louis M. Eilshemius: Selections from the Hirshhorn Museum and Sculpture Garden"; "Ben Nicholson: Fifty Years of His Art"; "Portraits"; "A. H. Maurer: Selections from the Hirshhorn Museum and Sculpture Garden"; "Grant Mudford: Photographs"; and "David Smith in the Hirshhorn Museum and Sculpture Garden." Loan exhibitions include "Saul Steinberg," "Richard Estes: The Urban Landscape" and "Calder's Universe." In FY 1980 major exhibitions produced by the Museum will feature the works of Arshile Gorky, Miro, Fernando Botero, Oscar Bluemner, and Barbara Hepworth. A visiting exhibition will highlight Gorky's Newark Airport Project. Among the Hirshhorn exhibitions which have circulated throughout this country are the "Gregory Gillespie" and the "Philip Evergood" shows. The "Eilshemius" exhibition will tour as an offering of the Smithsonian Institution Traveling Exhibition Service.

To enhance visitor appreciation of specific exhibitions and modern art in general, the Hirshhorn produces catalogues for all major exhibitions as well as brochures and other interpretive publications, and conducts several lecture, film, and performing arts series. As an adjunct to the 1978 exhibition, "The Noble Buyer: John Quinn, Patron of the Avant-Garde," an all day seminar was conducted in cooperation with the Smithsonian Associates. Annual film series focus not only on contemporary art and artists but also present works of contemporary filmmakers. One film shown in 1978 was based on the creation of the di Suvero sculpture "ISIS." A concert series presented by the 20th Century Consort, a Washington chamber music group, is devoted to contemporary music spanning 20th century composition. Another popular activity is the "Hirshhorn Holiday," a presentation of mime, music and puppetry designed for a children's audience.

In FY 1978, the Hirshhorn initiated a comprehensive inventory of the permanent collection on a three-year rotating basis. Even though all of the over 6,000 works have been listed, only 2,500 have been catalogued with full scholarly documentation.

To maintain a contemporary collection which reflects current developments in painting and sculpture, and, wherever possible, to strengthen the permanent collection, the Museum accepts gifts and purchases works of art. During FY 1978, the Museum acquired 256 works, of which 21 were purchased with Federal funds and one with non-appropriated Trust funds; the remaining 234 were gifts. A notable gift, the monumental steel sculpture "ISIS" by Mark di Suvero, was commissioned for the Museum by the Institute of Scrap Iron and Steel, Inc.

The Museum also serves as a major lender to other institutions. In FY 1978, loans were made to 44 museums and university galleries, including the Metropolitan Museum of Art, the Lyndon B. Johnson Library, the Akron Art Institute, the Phoenix Art Museum, and the San Francisco Museum of Modern Art. Works were loaned to eight foreign museums in England, Canada, Japan, Switzerland, and Germany. The Hirshhorn also was invited to select the U.S. entry to the Belgrade International Exhibition staged in conjunction with the Conference on International Security and Cooperation, attended by 33 nations. The selection, paintings and sculpture by William de Kooning, was so successful that its tour was extended to include Bucharest, Warsaw, Vienna, and Berlin as part of an exhibition under the auspices of the International Communications Agency.

Research at the Hirshhorn Museum is directed at documenting as fully as possible the works of art in the collection, interpreting modern art, and analyzing art movements. Publication and dissemination of the results to a broad spectrum of the public, including other museums, scholars and students throughout the world, are vital aspects of the program. A corollary of research is education. Among activities offered are museum training and internships for undergraduate and graduate students and Smithsonian Fellows. Equally important is the docent program in which some 67 volunteers, trained by the Museum, interpret the exhibitions for the general public in daily tours. The docents also travel to elementary schools in the Metropolitan Washington area to present slide programs on contemporary art and the Museum.

EXPLANATION OF PROGRAM CHANGE - An amount of $24,000 is requested to improve the Museum's capability in the area of collections management. In FY 1978, the Museum made a desired move toward creating more exhibitions using its own resources of collections and staff. At the same time, high priority was placed on compiling thorough and complete records of the more than 6,000 works of art in the permanent collections while concurrently developing a system for conducting inventories of the collections on a regular, rotating basis over three-year periods. The creation of original exhibits is an important function of a national museum of contemporary art, and the cataloguing is essential to sound management of the collections. Both endeavors have increased the workload of existing staff substantially.

To provide assistance in the cataloguing effort (more than 2,000 objects which have been exhibited over the past nine years have been catalogued, leaving 4,000 to be done), which will bring the Museum's records up to the best known standards, an increase of $19,000 is sought. Of this amount, $5,000 will be used to hire a part-time clerk typist to provide necessary typing of new records and to release professional staff to concentrate on management and exhibitions. In addition, $14,000 will be used to purchase a specialized system which will allow the Museum flexibility in its data collection, storage and retrieval; save staff time from repetitive recording operations; and facilitate registrarial operations in conjunction with Museum acquisitions, exhibitions, loans and insurance.

A further $5,000 is requested to enable the Museum to hire and train a part-time art handler to assist the one full-time art handler in moving the many large art objects, too unwieldy for one individual. Such assistance will better assure safe handling of objects during peak periods of changing exhibitions and will relieve professional staff of inappropriate tasks.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds are derived from a variety of sources including the Museum's share of sales in the museum shop; other receipts such as fountain coins and sales of exhibits brochures; product development activities; and allotments. The funds are used to help finance the printing costs of new exhibit brochures, to purchase works of art, to finance travel costs associated with meetings of the Museum's Board of Trustees, and to defray costs of special events held in connection with the opening of new exhibits.

Restricted Funds--Funds provided here are generally gifts placed in accounts which specify the use of the donation or bequest. Funds come from individuals, organizations or corporations, and are designated for the support of particular exhibitions or projects. In FY 1978, the majority of the restricted funds came from the Armand Hammer Foundation in support of the exhibition "Orozco, Rivera, Siqueiros: A Selection from the Mexican National Museum." In FY 1979, funds are designated for research travel by the staff, for "Hirshhorn Holiday" from a grant by the Smithsonian Women's Committee, and for the Steinberg exhibition (funded by a grant from Smith Corona Marchant). In FY 1980, the Hirshhorn Museum anticipates the possibility of adding important works of art to the collection, using private gifts of up to $300,000.

FREER GALLERY OF ART

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	30	576	-	-	-	1	17	956	-	-
FY 1979 Base	30	611	-	-	-	-	20	1070	-	-
FY 1980 Estimate	29	626	-	-	-	-	22	1098	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	30	-1	29
Number of Other Positions.....	3	0	3
11 Personnel Compensation.....	496		496
12 Personnel Benefits.....	54	-6	48
24 Printing and Reproduction....	4		4
25 Other Services.....	17	13	30
26 Supplies and Materials.....	27	8	35
31 Equipment.....	13		13
TOTAL	611	15	626

Analysis of Change

Necessary Pay.....	15
Program Funds.....	0

ABSTRACT - The Freer Gallery of Art has a continuing program to search for and to acquire works of Oriental art of the highest quality and to conserve, study, and display those objects as keys to understanding the civilizations that produced them. A reduction of one permanent position is recommended for FY 1980. This position has been associated with the Gallery's library. The funding related to this position will be used to complete the photographic records of the collection; to improve security for paintings on exhibition; to provide more seating for visitors to the exhibitions; and to improve lighting. Necessary pay in the amount of $15,000 is required for existing staff.

PROGRAM - The Freer Gallery of Art houses one of the world's most distinguished collections of Oriental art. Included in the collection are over 12,000 works of art from China, Japan, Korea, India and the Near East. The collections cover paintings; sculptures and other objects in stone, wood lacquer, jade, pottery, porcelain, bronze, gold and silver; and Biblical manuscripts. There is also an outstanding collection of American paintings, especially the works of James McNeill Whistler. Items not currently on exhibition, as well as the research library of 25,000 volumes, are available to students and scholars.

An inventory of the entire art collection was finished in FY 1978. Work to complete the photographic files of the collection is targeted for FY 1980. The successful completion of this aspect of collections management now enables the Gallery to focus on other areas.

The unique Oriental collections of the Freer Gallery, together with notable American holdings, have made the museum a center for students, scholars, and the general public. With the growing awareness of the importance of achieving closer cultural understanding between the United States and the nations of the Near and Far East, demand for the services provided by the Gallery and its staff has continued to increase.

Freer Gallery research facilities--comprising the collections, curatorial staff, library, and conservation laboratories--form the nucleus of its specialized public service. During FY 1978 new exhibitions provided the most visible evidence of the results of curatorial and conservation research activities. Enthusiastic press reviews of these exhibitions and the record number of visitors to the Gallery that year are indications of the warm receptions these exhibitions enjoyed. Closely linked with the individual exhibitions is a project to improve the exhibition galleries for the enjoyment and comfort of visitors. During FY 1979, there will be a continued emphasis on special exhibitions and further improvement of the galleries. Because of planned renovations in FY 1980 it may be necessary to close temporarily portions of exhibition space. Consequently, no special exhibitions are being scheduled for that period.

In April, 1978, the Gallery opened a major exhibition entitled, "Chinese, Japanese and Korean Ceramics." Approximately 350 objects from the Freer's collection of Chinese, Japanese and Korean ceramics were included in the exhibition, spanning the period from the neolithic to the end of the 19th century. Publication in 1975 of a handsomely illustrated volume on ceramics in the Freer Gallery of Art (part of a series entitled Oriental Ceramics: The World's Great Collections) provided the original impetus for the exhibition. Throughout the exhibition, there were new, more informative labels and more emphasis on color and texture of backgrounds to accentuate the art objects.

The major exhibition in the fall of 1978 was "The Brush of the Masters: Drawings from Iran and India." The 82 master drawings included in the exhibition were executed between 1400 and 1800. A fully illustrated catalogue accompanied the exhibition.

Two smaller exhibitions were assembled at this time. Representative paintings by Chinese masters of the Ming dynasty (1368-1644) provide a survey of developments in the Che and Wu schools. A selection of Japanese woodblock prints by such masters as Utamaro and Hokusai marks the first exhibition of this type ever held at the Gallery. The installation for the woodblock prints on large fabric-covered panels was a successful experiment in introducing variety to the galleries without major structural change. Further experimentation with panels of this type is planned for the American painting galleries.

In the spring of 1979, "Japan Today"--a celebration honoring the cultural, intellectual and economic life of contemporary Japan--will be inaugurated with major events in Washington, D.C., New York, Chicago, Denver and Los Angeles. As part of its participation in the celebration, the Freer Gallery will open a special exhibition of Japanese lacquer on April 17. Approximately 60 pieces of lacquer from the Freer collection will be included, and stress will be placed upon the technical aspects of the lacquer tradition. A fully illustrated catalogue will be published. Lectures by specialists in the field of Japanese lacquer will accompany the exhibition.

The increasing number of visitors to the Freer Gallery (approximately 30,000 more people in FY 1978 than in the previous year) has highlighted several areas of concern which will be met in FY 1980. A substantial effort will be made to design and produce protective structures for the rare Oriental paintings on exhibition. Currently these works of art

are fully exposed to public contact. There is also a concern to provide more and better seating for the comfort of the large number of visitors throughout the year, now nearing a quarter of a million people.

As a public service, the Freer attempts to provide a timely response to every request for information from the general public and scholars. To improve the Freer's capability as an information resource, a program has begun to expand the Japanese reference materials for basic research purposes. Attendance at the Freer lecture series increased 13 percent over the previous year.

EXPLANATION OF PROGRAM CHANGE - The proposed reduction of one permanent position associated with the Gallery's library is based on the premise that new equipment for handling the large volume of slides will be installed in FY 1979 and will reduce substantially the need for a position in that area. The funds related to the position are needed to complete the photographic record of the collections of art, to strengthen security for the Oriental paintings on exhibition through the design and fabrication of protective structures, and to provide more and better seating for visitors. These funds are also required for the major effort to improve the lighting system in the Freer Gallery.

NON-APPROPRIATED SOURCES OF FUNDING:

Restricted Funds--The major portion of the non-appropriated Trust funds for the Gallery stem from the Freer Gift and Bequest. As directed by the Gift and Bequest, these funds are used to cover the expenses of the professional curatorial staff and associated travel, acquisition for the collection and library, the maintenance of the Freer's enclosed courtyard and grounds, and the support of the Freer museum sales shop. Other restricted funds may come as result of the Gallery's applications for smaller sums from the Japan Foundation and from the Metropolitan Center for Far Eastern Studies (Tokyo). These would be used for assistance in acquiring library materials dealing with the history of Japanese art.

ARCHIVES OF AMERICAN ART

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	17	458	-	-	-	-	13	300	-	-
FY 1979 Base	17	475	-	-	-	-	13	269	-	-
FY 1980 Estimate	17	519	-	-	-	-	13	253	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	17	0	17
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	361	31	392
12 Personnel Benefits.....	35	3	38
21 Travel & Trans. of Persons....	9	2	11
22 Transportation of Things.....	5		5
23 Rent, Comm. & Utilities.....	32		32
24 Printing and Reproduction.....	16	5	21
25 Other Services.....	3		3
26 Supplies and Materials.....	8	2	10
31 Equipment.....	6	1	7
TOTAL	475	44	519

Analysis of Change

Necessary Pay.....	10
Program Funds.....	34

ABSTRACT - The Archives of American Art assembles and preserves the primary documentation needed by students and scholars who conduct research in American art history. It acquires artists' paper and the records of galleries, museums and art societies, andmakes these resources easily available through microfilm and a national network of regional research centers. As the nation's largest repository for such materials, it serves research needs of individuals, colleges and universities, museums and other cultural institutions.

An increase of $34,000 is sought in FY 1980 for the continued development of the committees within several states which plan and organize projects for the conservation and microfilming of local records. These records are essential to the study of American art history. Necessary pay in the amount of $10,000 is required for existing staff.

PROGRAM - The Archives of American Art (AAA) was established in Detroit in 1954 in response to a rising public and scholarly interest in the history of American art. The AAA encourages and makes possible research and publication in American art history by locating and collecting the records of artists, dealers, critics and curators, as well as those of museums and other art institutions. These records consist of manuscript material in the form of letters, diaries, sketchbooks, notes and business papers. They also include photographs and rare printed items. The very large quantity of records gathered by the area directors is processed, catalogued, microfilmed and preserved in the Washington office. All microfilm is then distributed to the five centers for use by researchers, who also can borrow rolls of films through their libraries.

During FY 1978 the Archives acquired 262 new collections. Among these were the papers of Alfred Frankenstein, Perry Rathbone, John Storrs, Ulfert Wilke, the Seligman Gallery and the American Art Association. New oral history interviews were conducted: most notable were those with Nathan Oliveira, Tony Smith, Porter McCray, and Mrs. E. Bliss Parkinson. In FY 1978 a Washington area collector was added to the staff. This collector will cover the mid-Atlantic region, an area that is rich in American art history. The papers of the painters Prentiss Taylor and Herman Maril have been acquired, and negotiations are underway for those of Thomas Eakins, Gene Davis and the Phillips Gallery.

The addition of one new technician in FY 1978 dramatically increased the Archives processing capability. Over 10,000 new catalogue cards were produced. There were 107 collections microfilmed and over 134 new rolls of film generated, raising the total number of microfilm rolls to well over 4,000. The holdings of the Archives number 3,600 collections, or more than 5.5 million papers and photographs. These items require extensive preservation to ward off decomposition. With the additional funds received in FY 1979, preservation of these items has been accelerated; the special supplies and equipment purchased have reduced substantially the real danger of deterioration.

Over 2,500 researchers worked in Archives regional centers during FY 1978. The staff processed an additional 446 interlibrary loan requests and sent out over 1,200 rolls of microfilm throughout Europe and America. Over 1,460 inquires were received and answered relating to the Archives holdings. The area directors, the deputy director and the curatorial staff gave lectures to a wide assortment of organizations and frequently conducted tours of the Archives offices to groups of librarians, archivists, teachers, students and Congressional representatives. Although the number of exhibits has been reduced, the Archives still has an active exhibition program. During FY 1978 it co-sponsored exhibits at Boston's City Hall and its Museum of Fine Arts. Exhibits of John Singer Sargent and Robert Fried were displayed at the de Young Museum in San Francisco. The second edition of the publication Archives of American Art: A Checklist of the Collection: 1977 was published.

In FY 1979 papers of Richard Diebenkorn, Charles Biederman, Thomas Buchanan Read, Lloyd Goodrich and Winslow Homer are scheduled for acquisition. Interviews with Alfred Frankenstein, Robert Bechtle, Wayne Thiebaud, Archibald Motley and Richard Hunt will be conducted under the oral history program. An updated version of the Checklist of the Collection and the bibliography, Arts in America, a contribution of major significance to the study of art in America, will be published. FY 1979 also will mark the 25th anniversary of the founding of the Archives, and a symposium on American art history is scheduled as one of several events.

EXPLANATION OF PROGRAM CHANGE - The Archives program is designed to give scholars access to the records they need: the records of artists not only in a few major centers, but also in other cities and states where thriving art movements have existed. Valuable documents in these areas, many of them unknown to historians, are constantly subject to loss, destruction or deterioration. With the leadership and encouragement of the Archives of American Art, state committees are being formed to survey local art-related records, and to develop programs to preserve and make them available to researchers. Pilot programs have been started in Texas and Rhode Island.

In order to continue this cooperative conservation effort, the Archives proposes to establish a new position, the director of cooperative programs. This person would establish relations with state groups and coordinate educational programs with a view to locating, preserving and microfilming records. The director will also work with the Archives' regional directors on similar activities in their areas and in the development of a systematic nationwide oral history program to obtain the reminiscences and observations of American artists, critics, collectors and curators.

An amount of $34,000 is requested to fund this position. This new position will be made available by redirecting an existing processing technician position. The processing workload will be reassigned among the remaining technical staff and funds formerly alloted to this position will be redirected to cover the travel costs of the proposed new director of cooperative programs, and to fund printing and reproduction, supplies, and equipment costs. These funds will help enable the Archives to enlarge its regional microfilming program scheduled to begin in FY 1979. As a result of this program, collections which cannot be removed from their existing location could be filmed on site. The Archives will thus preserve and make available to scholars throughout the world material which would otherwise be inaccessible.

NON-APPROPRIATED SOURCES OF FUNDING:

Restricted Funds--Funds are provided here as a result of gifts and contributions, fund raising activities (such as an annual auction and travel tours) and a membership program. The funds are used for the general support of the program of the Archives, including 13 full-time and two part-time positions. In addition, small grants are received from private foundations and state governments to assist in oral history projects and other designated purposes. For example, the Andrew Mellon Foundation's gift of $20,000 in FY 1978 supports the Archives card catalogue project to be undertaken this year. Funds are anticipated to remain at about the same level through FY 1980.

COOPER-HEWITT MUSEUM OF DECORATIVE ARTS AND DESIGN

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	19	349	11	363	-	21	13	900	-	39
FY 1979 Base	20	546	12	300	-	-	13	783	-	61
FY 1980 Estimate	21	623	12	320	-	-	13	857	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	20	1	21
Number of Other Positions.....	0	3	3
11 Personnel Compensation.....	331	43	374
12 Personnel Benefits.....	32	4	36
21 Travel & Trans. of Persons....	4		4
22 Transportation of Things.....	2		2
23 Rent, Comm. & Utilities.....	11		11
24 Printing and Reproduction.....	11		11
25 Other Services.....	29	20	49
26 Supplies and Materials.....	68	10	78
31 Equipment.....	58		58
TOTAL	546	77	623

Analysis of Change

Necessary Pay.....	12
Program Funds.....	65

ABSTRACT - The Cooper-Hewitt Museum opened to the public in October, 1976 in the Carnegie Mansion in New York City. The Museum is one of the world's great repositories of design and decorative arts materials with collections including textiles, drawings, prints, wallpapers, furniture, jewelry, glass, ceramics, silver and metalwork. For FY 1980 an increase of one position and $65,000 is requested: (1) one position and $50,000 designated for collections management requirements to enable the Museum to hire urgently needed assistance for the registrar's office and to purchase essential supplies, cabinets and files for keeping the catalogue and records of the Museum's permanent collections; and (2) $15,000 to provide for critical engineering services which will help maintain the Museum's systems of humidity control, ventilation, heating and air conditioning. Necessary pay in the amount of $12,000 is required for existing staff.

PROGRAM - The Cooper-Hewitt Museum, previously known as the Cooper Union Museum for the Arts of Decoration, was founded in 1896. Threatened with closure and discontinuance due to the lack of space and funding at Cooper Union, it was transferred to the Smithsonian Institution in 1968 and the collections moved to the Carnegie Mansion in 1970. It is the only museum in the United States which is devoted exclusively to the study of historical and contemporary design. The collections of the Museum currently span over 3,000 years and represent cultures and countries around the world. In addition to the collections, the Museum houses a library of approximately 30,000 volumes relating to design, ornament and architecture, a picture library of approximately 1.5 million photographs and clippings, and archives devoted to color, material and industrial design, forming one of the finest decorative arts and design research facilities in the United States.

Since the opening of the Museum in October, 1976, it has been honored by every major professional society in the design field, and its activities continue to receive critical acclaim. In a December 31, 1978 article in the New York Times entitled "Towering Achievements of '78," Ada Louise Huxtable wrote: "The Cooper-Hewitt Museum, in the combination of the timely, the scholarly and the provocative that has become its hallmark, held a 20th-century ornament show this year that was a feast for the eye." The public, too, has responded enthusiastically. In a little over two years, there have been about 400,000 visitors who have contributed more than $111,000 to Museum operations through admission fees.

Primary attractions in the second year were a series of lively exhibitions including two from the Museum's collections. Entitled "More than Meets the Eye" and "Look Again," these exhibitions showed more than 1,000 objects covering the full range of treasures in the collections. In addition, Cooper-Hewitt objects were included in 26 shows outside of the Museum. Among the borrowing institutions were: the Hayward Gallery in London, England, the Metropolitan Museum of Art in New York, the Minneapolis Institute of Arts, the University of Chicago David and Alfred Smart Gallery, and the Renwick Gallery.

Another Museum exhibition in FY 1978 was entitled "Embroidery through the Ages" which filled two floors of the Museum and was comprised of loans from the Musée des Arts Decoratifs in Paris and selections from the Museum's own collection of western European embroideries. The catalogue produced for the latter, Western European Embroideries, is the first in a special series of publications planned on various aspects of the Cooper-Hewitt collections. The embroidery exhibition was followed by "Cross Currents," displaying neoclassical French and Italian drawings and prints from the Cooper-Hewitt collections. The exhibition is being circulated by the Smithsonian Institution Traveling Exhibition Service, along with two other shows: "Subways" and "Close Observations," an exhibition of Frederick Church sketches from the Cooper-Hewitt collections. Two publications, Close Observation and Cross Currents were prepared by the Smithsonian Institution Press in conjunction with these exhibitons.

"Ornament in the Twentieth Century" opened to the public on October 3, 1978. This diversified exhibition of loaned and Cooper-Hewitt Museum objects was presented to counter the notion that design in the 20th century is lacking in ornamentation. The exhibition includes ornament for the human body, objects of daily use, posters, packaging materials, graphic designs and ornament in architecture. A companion exhibition to "Ornament," "Vienna Moderne:1898-1918, an early encounter between taste and utility," explores the Vienna Secession, Austria's "art noveau" movement. The exhibition includes all manner of decorative arts as well as paintings, graphics and architectural drawings.

In addition to its major exhibitions, the Cooper-Hewitt has held a series of small shows in the Contemporary Design Gallery. They have covered a wide variety of subjects, among which was "The Shopping Bag: Portable Graphic Art." The show focused predominantly on the paper carryall as a popular graphic medium and included over 100 colorfully designed shopping bags from all over the world. Also in the show were rare examples of band boxes, precursors of the shopping bag, from the permanent collections of the Museum. The Gallery also showed a traveling exhibition entitled "The Museum of Drawers," a self-contained unit of miniatures by 500 international painters, sculptors and architects.

During FY 1978, the Museum offered a full complement of workshops, lectures, seminars, tours and special classes on decorative arts and design professions. Attendance in the programs increased to 3,500 students this year. Docents conducted 430 tours accommodating over 15,000 young people and adults. Free performing arts events were held in the Carnegie garden during the good weather. A video film and slide show on the architecture and design of Los Angeles was also shown during the summer. Museum membership grew to 5,500 and a newsletter was launched to inform members of upcoming events, exhibitions and programs as well as the development and history of the Museum.

Over 200 donors contributed close to 4,400 objects to the Museum's collections during FY 1978. Outstanding gifts included four albums of drawing by the 18th century French artist J.R. Anjo, an album of drawings and prints by Ely Jacques Kahn, a length of 17th century Persian velvet, 12 silk murals by Lydia Bush-Brown and two Venetian Blackamoors. In addition, the Museum was most fortunate to receive an extraordinary collection of over 4,000 matchsafes dating from the early 19th century, and a Tiffany dragonfly lamp and silver tea service belonging to the Carnegie family. Perhaps the most celebrated gift of the year, however, was the elaborately embellished Rolls Royce, donated by John and Yoko Lennon, displayed in the "Ornament" exhibition.

In addition to the exhibition, publications and education programs, the Museum must continue to make substantial efforts toward managing and taking inventory of the collections, constructing proper study and storage facilities in the new quarters, and providing for the security and conservation of an immense variety of objects.

EXPLANATION OF PROGRAM CHANGE - One new position and an amount of $50,000 are sought to enable the Museum to establish professional standard registrarial records and a complete catalogue of the Museum's collections. As was the case in many museums founded in the 19th century by private benefactors, no catalogue was ever produced, and records of collections were kept in a most informal way. It is critical to develop proper records and to prepare the records for eventual conversion to a computer-based operation. The cataloguing work can be done most efficiently if it is carried out at the same time as the inventory which is being conducted with funds appropriated for that purpose in FY 1979 and proposed in FY 1980. The requested funds are designated for one urgently needed full-time registrarial assistant and part-time clerical assistance to begin developing these records ($35,000), and for necessary cabinets and files to contain the records as well as supplies and equipment for the registrar's office ($15,000).

An additional amount of $15,000 is requested to hire part-time staff or to purchase contractual services for routine maintenance of the Museum's humidity control, ventilation, and heating and air conditioning systems.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--Funds are provided in the form of an annual allotment for the Museum primarily to support 12 positions including those of the director, an assistant director, an administrative assistant, the entire curatorial staff and the registrarial staff. These funds are used for special events for opening of new exhibits.

Restricted Funds--These funds are derived from a variety of sources including admissions revenues, sales in the museum shop, product development activity, the annual auction, and membership and educational programs. Other funds here are in the form of gifts provided by organizations or corporations for specific purposes. Generally the monies provide support for a particular exhibition or project.

The Robert Sterling Clark Foundation gift ($32,200 estimated in expenditures for FY 1979) will provide for design and construction of a new museum shop as well as the salary of a shop manager for one year and the purchase of some inventory. A gift from the Kress Foundation

($43,000) will enable the Museum to construct a paper conservation laboratory. In support of exhibition, the Japan Society pledged $26,000 for the "Japan Today" show and the New York State Council of the Humanities, $23,500 for "Urban Open Spaces."

Federal Grants and Contracts--These funds have been provided by various agencies and departments including the National Endowment for the Humanities and supported particular exhibitions or projects in the past. No proposals are pending at this time for either FY 1979 or FY 1980.

MUSEUM OF AFRICAN ART

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	-	-	-	-	-	-	-	-	-	-
FY 1979 Base	30	350	-	-	-	-	-	-	-	-
FY 1980 Estimate	30	700	-	-	-	-	10	350	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979/1	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	30	0	30
Number of Other Positions.....	10	0	10
11 Personnel Compensation.....	237	237	474
12 Personnel Benefits.....	24	23	47
21 Travel & Trans. of Persons....	10	10	20
22 Transportation of Things.....	10	10	20
23 Rent, Comm. & Utilities.....	12	13	25
24 Printing and Reproduction.....	18	17	35
25 Other Services.....	12	13	25
26 Supplies and Materials.....	17	17	34
31 Equipment.....	10	10	20
TOTAL	350	350	700

Analysis of Change

Necessary Pay.....	0
Program Funds.....	350

ABSTRACT - The Museum of African Art collects, studies and displays art objects, and conducts extensive education programs based on its collections in order to pursue its goal of building a greater appreciation for African art, one of the world's major art traditions. Upon enactment of an FY 1979 supplemental appropriation, the Museum of African Art will become part of the Smithsonian Insitution as authorized by P.L. 95-414. This will mark one of the most significant developments in the Smithsonian's recent history and will add to the Institution's extensive collections and expertise, the broad and rich subject matter embraced by the traditional art forms of African culture. An increase of $350,000 is requested for FY 1980 to annualize the part-year estimated operating costs for the last six months of FY 1979.

PROGRAM - The Frederick Douglass Museum of African Art (MAA) opened to the public in the first Washington residence of Frederick Douglass on Capitol Hill. The Museum has now grown into a complex of buildings on Capitol Hill which contains 12 public galleries, displaying

/1 Represents FY 1979 program supplemental request for part-year operating costs of the Museum of African Art.

approximately 500 objects; an auditorium with a seating capacity for 160 persons; curatorial reserves; photo archives; a library; a graphics shop; staff offices; and "Boutique Africa," a small shop specializing in contemporary African crafts.

The Museum's permanent collections, which predominantly cover the art of styles first produced for magical and religious purposes, include some 7,000 objects of traditional African sculpture, artifacts, musical instruments and textiles; more than 100,000 photos, slides and films bequeathed the Museum by the late Time-Life photographer and Africanist, Eliot Elisofon; and a specialized library of approximately 5,000 items. More than 1.5 million people have visited the Museum or attended its various extension programs since its opening. Over 10,000 groups from all over the United States have participated in the Museum's special orientation sessions on African art and culture.

The Museum has mounted over 30 exhibitions in its own galleries and 40 extension exhibitions in other parts of the country, and has lent some 2,000 works of African art to exhibitions at 125 institutions in 26 states. Current and planned shows include "19th Century Afro-American Artists"; an exhibit of recent acquisitions for the permanent collection; "Woman-Power and Art," a selection of works depicting the use of various stylized female motifs; the works owned by Chaim Gross, a pioneer collector of African art; "African Musical Instruments"; an exhibition of silkscreened African cave paintings; and another on the influence of African traditions on western art of the 20th century.

The MAA has an extensive educational program in addition to its exhibits program. Art and dance classes, craft workshops and story-telling sessions are conducted for children. In FY 1978, for example, the Museum held a workshop in "adinkra stamping," the traditional technique in Ghana, West Africa of printing textiles of ceremonial significance. In addition, staff members go into local elementary schools to assist teachers and work directly with the classes to infuse an understanding of African values and culture into the curriculum. Extensive teaching supplements have been developed in conjunction with these school visits. The Museum also has a department of higher education which offers lectures and courses at local universities and other museums and provides consultative services to them. Traveling exhibitions are circulated among 12 predominantly black colleges in the southern United States in another departmental effort in making students more familiar with the traditional African art forms. The library, archives and collections are available to advanced students conducting research on African art and culture.

The education departments also have produced 14 publications, an award-winning film entitled "Tribute to Africa," and an audiovisual kit, "The Creative Heritage of Africa," which was distributed all over the world by Encyclopedia Britannica. Finally, the wall murals of the N'debele village of southeastern Africa were replicated in an entire alley on Capitol Hill.

Under Smithsonian aegis the programs of the Museum will receive the added attention and support that the Institution's professional staff and central support units can offer. With continued support from the Congress, the Museum of African Art will flourish as an important national resource, helping the public gain a long overdue appreciation of the traditional art forms of African culture.

EXPLANATION OF PROGRAM CHANGE - No change in staffing or programs is anticipated for FY 1980. The increase of $350,000 requested is to annualize the part-year appropriation sought in the FY 1979 supplemental request that has been submitted to the Congress.

NON-APPROPRIATED SOURCES OF FUNDING:

Restricted Funds--These funds will derive from museum shop sales and tuition rebates from cooperating colleges and universities whose students participate in the Museum's higher education classes. The funds will be used to complement and augment the Federal appropriations by providing support for program enrichment, collections acquisitions and the higher education department.

It also is anticipated that the Museum will continue to receive support from the private sector in the form of gifts and foundation grants for specific purposes such as exhibits and collection acquisitions. When the Museum becomes part of the Smithsonian Institution and more direct experience is gained with its Trust fund activities, a more detailed budget will be prepared and distributed.

PUBLIC SERVICE

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	74	2,034	27	2,643	-	52	-	92	1	77
FY 1979 Base	70	2,201	27	3,228	-	2	-	107	1	77
FY 1980 Estimate	70	2,223	28	3,242	-	13	-	94	-	-

*FTP = Full-time permanent positions

Analysis of Change (Federal Request)

Necessary Pay..... 35
Program Funds..... -13

The FY 1979 base for the Public Service Activity totals 70 positions and $2,201,000. A net program decrease of $13,000 is recommended for FY 1980. Program changes proposed for FY 1980 consist of an additional $12,000 to provide adequate operating funds for the immediate office of the Assistant Secretary for Public Service and the Office of Telecommunications, offset by a decrease of $25,000 in the exhibits program of the Anacostia Neighborhood Museum associated with the production of fewer copies of traveling exhibits and the giving up of a part-time exhibits specialist position. An amount of $35,000 is required for necessary pay.

The sources and uses of non-appropriated Trust funds are explained individually for each line-item in the Public Service Activity that receives non-appropriated funds.

OFFICE OF THE ASSISTANT SECRETARY FOR PUBLIC SERVICE

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	10	226	1	304	-	-	-	2	-	(15)
FY 1979 Base	9	241	8	348	-	-	-	3	-	-
FY 1980 Estimate	9	257	9	400	-	-	-	4	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	9	0	9
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	216	9	225
12 Personnel Benefits.....	21	1	22
21 Travel & Trans. of Persons...	3		3
26 Supplies and Materials.....	1	2	3
31 Equipment.....		4	4
TOTAL	241	16	257

Analysis of Change

Necessary Pay.....	4
Program Funds.....	12

ABSTRACT - The Office of the Assistant Secretary for Public Service guides and supports the public service units in the development of programs to advance the Institution's objectives in education, publication, information and performing arts; and keeps the Secretary informed and advised concerning the public service programs and activities. The Office of Telecommunications also is included under this heading. An increase of $12,000 is requested to provide sufficient funding for the functioning of these offices. Necessary pay in the amount of $4,000 is required for existing staff.

PROGRAM - 1. Immediate Office: With a base of seven positions and $199,000 the primary functions of the Office of Public Service are to stimulate, coordinate and supervise the steadily increasing activities of the Smithsonian's educational and public service components. These include the Anacostia Neighborhood Museum and the Division of Performing Arts; and the Office of Elementary and Secondary Education and the Office of Smithsonian Symposia and Seminars which are included under Special Programs. Also included are the dissemination of Smithsonian research and interests through publications programs of the Smithsonian Institution Press, the Smithsonian magazine, the Smithsonian Exposition Books and the International Exchange Service; the development and coordination

of a program using the services of volunteers to provide information to the public (in person, by phone and by mail) and the administration of a placement service of volunteer assistants throughout the Institution by the Visitors Information and Associates Reception Center; and the development and production of audiovisual materials.

II. Office of Telecommunications: The remaining resources identified for this office, two positions and $42,000, provide support for the Office of Telecommunications. The primary objectives of this office are to assist in determining Smithsonian policy and objectives for a telecommunications program to serve as one of the Institution's major means of education and enlightenment, and to develop and produce audiovisual materials for distribution to educational institutions and civic organizations as well as to public and commercial radio and television outlets.

EXPLANATION OF PROGRAM CHANGE - An additional $12,000 is requested to provide adequate funds for the functioning of these offices. The Immediate Office of the Assistant Secretary and Office of Telecommunications have not requested program increases for the past few years. The limited base funding available to these offices has not been adequate to absorb the higher costs of supplies and equipment or compensate for the larger proportion of funds that must be devoted to staff salaries due to merit promotions. The additional funds being requested will be used to defray these increased costs.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--I. Immediate Office: Funds are provided for the administrative costs for a publications coordinator responsible for the development, implementation and operation of a publishing plan for the Institution and for insuring that manuscripts developed throughout the Smithsonian are reviewed, evaluated and if warranted, published.

II. Office of Telecommunications: Funds are derived from allotments with small amounts of additional funds received from royalties from producers who use the Smithsonian resources and facilities. The funds provided are used to develop media programs (such as, the prize-winning film on the Institution; a film on the Multiple Mirror Telescope; a film on visual history; and "Radio Smithsonian," a weekly radio series); and to initiate research for the creation of special projects which may require additional funding from outside sources (such as, a children's special for commercial television; and a radio series on the theme of a "Nation of Nations" for National Public Radio). In addition, these funds are used to co-produce audiovisual educational materials with outside production agencies (such as a film on the National Museum of Natural History; a television special on the National Air and Space Museum; a film, "On the Side of Life," on the Hirshhorn Museum and Sculpture Garden; and a filmstrip series with Encyclopedia Britannica Educational Corporation).

Restricted Funds--Office of Telecommunications: Funds provided here are received from the Smithsonian's Women's Committee to support the Free Film Theater, a program which provides weekly film showings on a variety of artistic, historical, scientific and popular subjects for the visiting public at the Smithsonian.

ANACOSTIA NEIGHBORHOOD MUSEUM

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	19	557	1	24	-	15	-	69	-	-
FY 1979 Base	19	646	1	22	-	2	-	74	-	-
FY 1980 Estimate	19	631	1	25	-	13	-	-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	19	0	19
Number of Other Positions.....	2	0	2
11 Personnel Compensation.....	423	-2	421
12 Personnel Benefits.....	41		41
21 Travel & Trans. of Persons.....	3		3
22 Transportation of Things.....	1		1
23 Rent, Comm. & Utilities.....	25		25
24 Printing and Reproduction.....	20		20
25 Other Services.....	58	-3	55
26 Supplies and Materials.....	72	-10	62
31 Equipment.....	3		3
TOTAL	646	-15	631

Analysis of Change

Necessary Pay.....	10
Program Funds.....	-25

ABSTRACT - One of the basic premises on which the Anacostia Neighborhood Museum (ANM) was established was to provide the opportunity and the resources for a continuing museum experience for community groups and individuals who might not otherwise realize such an opportunity. Through a carefully researched educational program of exhibits and activities especially relevant to the community and its needs, Anacostia has accomplished this goal and has become recognized as a center of black history and culture. Since its opening in September, 1967, it has been visited by more than 640,000 people. A program reduction of $25,000 is proposed for FY 1980. Necessary pay in the amount of $10,000 is required for existing staff.

PROGRAM - The Anacostia Neighborhood Museum has brought the museum experience to members of Washington's community who otherwise might not have contact with it. In the process, the Museum has gained a national reputation as a center for ethnic studies through its intern programs, permanent and traveling exhibitions, research efforts and pioneering educational projects. The Institution is undertaking a review, with outside assistance, to determine whether and how to continue a community museum while institutionalizing a broadly based center for studies and publication of black history and culture. A thorough documentation of the Museum's operational activities and the possible need for creation of collections management procedures will be studied.

Currently, the Museum's focus centers on its exhibitions. Three exhibitions were researched, produced and installed in FY 1978; these were the "D.C. Art Association Show," the "Phil Ratner" exhibition, and "The Frederick Douglass Years." The "Ancient African Kingdom" exhibit will open in early FY 1979 and a traveling version of the show is planned for later in that year. The research program's findings, in the areas of urban studies, minority and ethnic studies, and Anacostia history, are used in exhibit design and production and in the development of exhibition catalogues and educational materials. Three catalogues and four teacher workbooks were published in FY 1978 in conjunction with the new exhibits. Further, the research staff gave support to D.C. public schools and institutions of higher education in the Washington, D.C. area by helping them develop courses and projects that overlap with the Museum's studies and collections. The education department uses the Museum's ethnically-based materials to develop such a wide range of innovative programs, activities and projects. Finally, the exhibits design and production laboratory works closely with the Museum's research and education staffs in the development, design, and production of exhibits for the Museum and in their distribution through the Smithsonian Institution Traveling Exhibition Service.

Three exhibitions are planned for FY 1980. One will focus on the African influence on past and contemporary Afro-American artists. The second show will explore the height of the period of creative expression in the black community of Harlem, the period from 1925 to 1930. The third will present the story of Anna J. Cooper, the black woman born in slavery who went on to play a pivotal role in the higher education of blacks in the city of Washington.

EXPLANATION OF PROGRAM CHANGE - A decrease of one part-time exhibits specialist and $12,000 and a reduction of $13,000, associated with the production of fewer copies of traveling exhibits, are proposed for FY 1980.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--Funds are alloted to cover the salary and benefits costs of a wood craftsperson in the exhibits department. Additional funds are provided from donations, exhibit rentals and the sale of catalogues. These funds are used to purchase supplies and materials for the various museum programs and for community activities.

Restricted Funds--In FY 1978, these funds were provided by the Ford Foundation to finance a program to train minorities in exhibits design and production. The program expired in 1978 and no funding is anticipated for FY 1980.

INTERNATIONAL EXCHANGE SERVICE

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	8	235	-	-	-	-	-	-	-	-
FY 1979 Base	5	216	-	-	-	-	-	-	-	-
FY 1980 Estimate	5	217	-	-	-	-	-	-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	5	0	5
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	76	1	77
12 Personnel Benefits.....	7		7
22 Transportation of Things.....	15		15
25 Other Services.....	112		112
26 Supplies and Materials.....	3		3
31 Equipment.....	3		3
TOTAL	216	1	217

Analysis of Change

Necessary Pay.....	1
Program Funds.....	0

ABSTRACT - Through the International Exchange Service (IES), public and private institutions in the United States exchange publications with organizations in other countries. No program increase is requested for FY 1980. Necessary pay in the amount of $1,000 is required for existing staff.

PROGRAM - In 1849, the Smithsonian Institution established a system for the exchange of its literary, scientific and cultural publications with learned societies of other countries. This program was so successful that later it was expanded to accommodate the exchange of publications of other American organizations. The International Exchange Service responsibilities were formalized when the Brussels Convention of 1886 was adopted by the United States in 1889, and the Smithsonian Institution became the official exchange bureau in the United States for the international exchange of literary, scientific and cultural publications. At the same time, IES assumed responsibility for the exchange of U.S. government publications as a service for the Library of Congress.

In FY 1977 the Exchange transferred the sending of the weekly issues of the U.S. Patent specifications to the Department of Commerce. Early in FY 1978, the Smithsonian and the Government Printing Office (GPO) concluded an agreement under which GPO assumed physical responsibility for the international exchange of government documents on a reimbursable basis. This reimbursable agreement with GPO was renewed in FY 1979 for an amount not to exceed $150,000. The permanent transfer of this responsibility requires amendment of an existing statute. The necessary legislation was introduced in the 95th Congress but not enacted. It is expected that it will be reintroduced in the 96th Congress. If enacted, this transfer is expected to result in a more efficient operation, as the Government Printing Office is better staffed and equipped to meet the particular needs of the Library of Congress. It is also expected that enactment of the legislation will be followed by a one-time permanent base transfer of funds from the Smithsonian to the GPO.

Based on the positive results of a survey of nearly 200 academic institutions to determine the need for and utility of exchange services for scientific and literary publications, IES will continue to provide these services.

DIVISION OF PERFORMING ARTS

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	9	299	12	1,764	-	37	-	21	1	60
FY 1979 Base	9	322	14	2,229	-	-	-	30	1	77
FY 1980 Estimate	9	327	14	2,125	-	-	-	90	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	9	0	9
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	228	5	233
12 Personnel Benefits.....	22		22
21 Travel & Trans. of Persons...	11		11
22 Transportation of Things.....	1		1
23 Rent, Comm. & Utilities.....	1		1
24 Printing and Reproduction....	3		3
25 Other Services.....	50		50
26 Supplies and Materials.....	4		4
31 Equipment.....	2		2
TOTAL	322	5	327

Analysis of Change

Necessary Pay.....	5
Program Funds.....	0

ABSTRACT - The Division of Performing Arts (DPA) has primary responsibility for the production and presentation of live performance events of the Smithsonian Institution and its museums, with emphasis on programs which relate to and enhance museum collections and deal with national aesthetic expressions. No program increase is requested for FY 1980. Necessary pay in the amount of $5,000 is required for existing staff.

PROGRAM - DPA is the primary planning and supervising organization for all performances in the Smithsonian Institution. Associated functions include production of a record series and development of catalogues from the Smithsonian performances and collections.

The goals of the Division are to: stimulate public awareness of the Smithsonian museums as repositories of information and resources for learning; illuminate and enhance the public understanding of the museum collections; explore and explain the American aesthetic experience; and increase public knowledge about the expressive forms of human

behavior and the traditions of various cultures. Methods used to accomplish these goals are: presentations of music, dance, dramatic performances and workshop demonstrations; research and publication, including recordings, of relevant scholarship of the Division of Performing Arts and curatorial staffs; and programming and production of celebrations, festivals and children's programs which aid in the interpretation and enjoyment of the museum collections.

In FY 1979, the Division will continue its presentations of concert series featuring diverse forms of American and international expression. The 1978-1979 concert series includes presentations of chamber music, jazz and blues performances by such notables as Al Cohn, Zoot Sims, and Alberta Hunter and international dance by such international artists as Sun Ock Lee of Korea and Magda Saleh of Egypt. Celebrations, in conjunction with the National Museum of History and Technology, will again be staged for Christmas, July 4th and a spring festival. These celebrations, intended to stimulate interest in the National Collections and to demonstrate, in an entertaining manner, aspects of American life, past and present, feature various craft demonstrations using the Museum's collections, and musical and choral presentations. Planned releases during FY 1979 in the recording series include Duke Ellington, 1940 and Jelly Roll Morton in Concert.

DPA also conducts a number of educational projects for children and young adults. A children's theatre, which will broaden the puppet theatre concept by featuring all facets of the arts for children, including film, dance, theatre, magic and mime as well as puppetry, opened in FY 1979. In another educational effort DPA is continuing the development of a catalogue of black cultural expressions, such as storytelling, foodways, hymns and gospel music. The catalogue is designed for use in the curriculum of educational institutions at the secondary and collegiate levels and is scheduled to be published in FY 1979.

In order to increase audience size and enhance the educational experience the Division plans to establish two or three day residencies during which visiting artists will conduct masters classes, workshops, open rehearsals and informal discussion sessions to supplement the concert performance. The residencies will include curatorial involvement and collaboration with local institutions. Approximately six residencies a year are planned, beginning in FY 1979. In addition, multiple performances of particular concerts will continue to be presented to help reach wider audiences.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--Funds in this category are derived from ticket sales for performance events; carousel operations; commissions from concessions sales; and retail sales of publications and recordings (such as the recording of the Smithsonian collection of classic jazz). The funds are used to offset the cost of producing performing arts events and distributing educational materials.

Restricted Funds--These funds are derived primarily from foundation grants and are used to support programs being conducted by DPA. For example, a grant from the McDonald Corporation (projected expenditures of $15,000 in FY 1979) will be used to pay for the annual Christmas Celebration program conducted jointly by the Division of Performing Arts and the National Museum of History and Technology.

Federal Grants and Contracts--During FY 1979, the major source of funding has been contracts from the National Endowment for the Arts for the Jazz Oral History Project. These funds will no longer be available after the current contracts expire this year. Accordingly, the funding level in this category is expected to be minimal in FY 1980.

SMITHSONIAN INSTITUTION PRESS

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	28	717	7	551	-	-	-	-	-	32
FY 1979 Base	28	776	4	629	-	-	-	-	-	-
FY 1980 Estimate	28	791	4	692	-	-	-	-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	28	0	28
Number of Other Positions.....	1	0	1
11 Personnel Compensation.....	648	14	662
12 Personnel Benefits.....	63	1	64
21 Travel & Trans. of Persons....	1		1
23 Rent, Comm. & Utilities.....	1		1
24 Printing and Reproduction.....	46		46
25 Other Services.....	12		12
26 Supplies and Materials.....	3		3
31 Equipment.....	2		2
TOTAL	776	15	791

Analysis of Change

Necessary Pay.....	15
Program Funds.....	0

ABSTRACT - The Smithsonian Institution Press is responsible for the editing, design, production and distribution of printed materials produced by historians, scientists and curators. Such materials include research monographs, technical and scientific series, exhibit catalogues for Smithsonian museums, educational pamphlets, informational leaflets and the Smithsonian's annual report. The Press also acts as agent between the Smithsonian and the U.S. Government Printing Office in contracting for printing services and procurement of needed Federal forms and publications. No program increase is requested for FY 1980. Necessary pay in the amount of $15,000 is required for existing staff.

PROGRAM - The publication activity of the Press is a fundamental extension of the Smithsonian's basic research laboratories. The scientific, technological and historical series monographs published by the Press make the results of research conducted by Smithsonian curators and staff experts available to major libraries, museums, scientific institutions and interested members of the public throughout the United States and abroad.

In addition to publishing research findings, the Press edits and designs exhibit catalogues, educational pamphlets and informational leaflets which serve the millions of visitors to the Smithsonian and the extension programs conducted all over the nation. The Zoobook, for example, was published in FY 1978.

After review of manuscripts for adequacy of preparation, the Press staff designs the form which the publications will take, conducts all phases of the editing and guides the manuscript through the composition, printing and binding stages: through the Government Printing Office in the case of Federally funded publications, and with commercial establishments for those financed by other sources. The distribution section of the Press is responsible for receiving, warehousing and shipping the finished publications according to selected mailing lists.

The Press also edits, designs and produces Smithsonian Year, the Institution's annual report to the Regents and to Congress, as well as procures and distributes within the Institution a variety of necessary manuals, reports and directories, including copies of Congressional materials and reports from government agencies.

Publishing plans for FY 1980 will be determined primarily by the Press' client bureaus and offices and depend on the allocations of funds made available to these bureaus for publishing purposes. No major changes in organization, activities or priorities are foreseen for FY 1980. The Press was responsible for 130 publications in FY 1978, of which 90 were general publications and 40 were series monographs. FY 1979 and FY 1980 output appears likely to remain at about this level. Many of the publications received favorable review and the Press has been given awards for their excellent work. They recently received, for example, a "Certificate of Excellence Presented for Distinguished Achievement in the Communicative Arts" (for Zoobook) sponsored by the Communication Collaborative, Inc. of Chicago, Illinois.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--Funds are derived from sales of Trust-funded books, royalties and special publishing services. They support four staff members as well as production costs for scholarly publications which the Institution considers necessary to publish in support of its research, collections, exhibitions and other programs. Such a publication is the forthcoming four-volume work entitled Bibliography of Arts in America which will be one of the most comprehensive sources of information on the arts ever published.

MUSEUM PROGRAMS

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	293	7,121	24	750	1	53	-	96	-	45
FY 1979 Base	287	7,853	24	839	-	59	-	46	-	44
FY 1980 Estimate	285	8,287	24	895	-	50	-	32	-	11

*FTP = Full-time permanent positions

Analysis of Change (Federal Request)

Necessary Pay..... 136
Program Funds..... 298

The FY 1979 base for all units in the Museum Programs Activity totals 287 positions and $7,853,000. A program increase of $298,000 is requested for FY 1980 mainly for collections management, an Institutional priority for FY 1980, and for facilities maintenance. A net decrease of two positions is recommended. An amount of $136,000 is required for necessary pay.

Under the collections management category, an amount of $100,000 is sought for several purposes, including equipment purchases to enable the Conservation-Analytical Laboratory to expand its program of monitoring environmental conditions throughout Smithsonian museums; for rare book binding and preparation for the implementation of a new catalogue system by the Smithsonian Institution Libraries; and for collections storage and other purposes of the Smithsonian Institution Archives. For facilities maintenance, an increase of $161,000 is proposed, largely for the Office of Horticulture, to meet additional grounds maintenance responsibilities and to purchase supplies and equipment. Funds of $37,000 are designated for the purchase of additional research journals and books for the Libraries and for continued surveys to determine the needs of Native American tribal museums.

The sources and uses of non-appropriated Trust funds are explained individually for each line-item in the Museum Programs Activity that receives non-appropriated funds.

OFFICE OF THE ASSISTANT SECRETARY FOR MUSEUM PROGRAMS AND OFFICE OF MUSEUM PROGRAMS

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	97	1,916	-	7	1	38	-	101	-	-
FY 1979 Base	96	2,124	-	31	-	38	-	19	-	-
FY 1980 Estimate	93	2,336	-	7	-	44	-	-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	96	-3	93
Number of Other Positions.....	15	8	23
11 Personnel Compensation.....	1,701	140	1,841
12 Personnel Benefits.....	160	16	176
21 Travel & Trans. of Persons....	18		18
23 Rent, Comm. & Utilities.....	30	1	31
24 Printing and Reproduction.....	8	-1	7
25 Other Services.....	82	1	83
26 Supplies and Materials.....	104	35	139
31 Equipment.....	21	20	41
TOTAL	2,124	212	2,336

Analysis of Change

Necessary Pay.....	47
Program Funds.....	165

ABSTRACT - The Office of the Assistant Secretary for Museum Programs coordinates and provides direction to the Institution's central museum management and program support activities, maintains liaison with national and international museum organizations, undertakes special studies for improvement of museum operations and methodologies, and assists and advises the Secretary on these and related matters. The office also furnishes advice and technical assistance to other museums, undertakes studies on the effectiveness of museum exhibits and programs, conducts training and workshops for museum personnel, and disseminates technical information on museum practices. Also included under this heading are the South Group Buildings Management Office and the Office of Horticulture.

In FY 1978, the Office of International Activities was added to the group of units

reporting to the Office of the Assistant Secretary for Museum Programs, and the keeper of rare books was made part of the immediate office staff. In addition, a position of special assistant to the assistant secretary was assigned to the immediate office to oversee development of program planning for the Museum Support Center.

For FY 1980, an increase of $165,000 is requested. The funds are to be used for supply, equipment and maintenance needs for the Horticulture activities and those of the South Group Buildings Management, as well as for the Native American Training Program. The elimination of three positions is also proposed: one gardener (Horticulture) and two janitors (South Group Buildings Management). Necessary pay in the amount of $47,000 is required for existing staff.

PROGRAM - I. Immediate Office, Assistant Secretary for Museum Programs: This office administers, oversees, reviews and supports the Office of the Registrar, Conservation-Analytical Laboratory, Office of Exhibits Central, Smithsonian Institution Libraries, Smithsonian Archives, National Museum Act, Smithsonian Institution Traveling Exhibition Service, Office of Horticulture, Office of International Activities and South Group Buildings Management.

In cooperation with other units of the Institution, the office coordinates projects related to the development and improvement of facilities and operational methods of Smithsonian museums, and works closely with museum professionals nationally and abroad, to enhance the scholarly and educational functions of museums, to encourage the development of new techniques in museum administration and practice, to establish improved training programs for museum professionals, and to study the application of modern technologies to museum needs in such areas as conservation, storage and energy use.

In FY 1978, the office continued review of the implementation of recommendations contained in the "Collections Management and Policy Study," and directed the development of a collections inventory policy and procedure statement. The office directed continuation of the detailed program planning effort for the Museum Support Center and evolved details of working arrangements, in conjunction with the General Services Administration, for the architectural planning and construction phases for the Center. Participation in a number of national and international museological activities was actively sustained throughout the year.

II. Office of Museum Programs: This office conducts training programs for museum personnel, produces informational audiovisual presentations on museum conservation practices for distribution to museums and educational organizations, and undertakes evaluation studies to develop data for the improvement of the quality and effectiveness of museum exhibitions and educational activities.

The museum training program offers courses in the form of seminars and workshops taught primarily by Smithsonian staff to individuals employed by museums. Each course is devoted to a specific topic. Subjects taught cover all aspects of museum work including collections management principles, conservation methods, design and production of exhibits, museum lighting techniques, development of educational activities, cooperative programs with schools, museum budgeting, accounting and management methods, and preparation of museum publications.

In FY 1978, 475 museum professionals attended the 29 training workshops which were offered. All were filled to capacity, and most were oversubscribed. For FY 1979, 30 workshops will be held for an anticipated 500 participants. A comparable number of workshops will be scheduled for FY 1980. These projections reflect the limitation on available space and staff time which can be devoted to the training efforts. In order to extend the program to additional museum professionals, at no additional cost to the Institution, the office is exploring the possibility of cooperative arrangements in parts of the country in which Smithsonian expertise can be combined with local resources and facilities. Two

trial cooperative programs in 1978 established the feasibility and effectiveness of this approach.

Finally, in FY 1978, the office screened and placed 35 interns from the United States and abroad in various Smithsonian museums and departments. This active service will continue in future years.

The conservation information program produces audiovisual programs illustrating and explaining museum practices and techniques, with emphasis on museum conservation. These are made available as loans to museums, museum-related organizations and schools throughout the country. In FY 1978, 438 slide-cassettes and 700 videotape programs on conservation theory and practice were circulated to 300 organizations. Furthermore, 24 major museums or conservation training centers in the United States and abroad purchased many copies of videotapes and slide-sets for their continuing use for training purposes; four new videotapes and three new slide-cassette programs are scheduled for production in FY 1979 and in FY 1980. Research for script preparation for future programs will continue as a basic aspect of this production effort. A limited amount of resources available for the conservation information program will be applied in FY 1980 to routine updating and maintenance of equipment needed to produce programs that are of acceptable quality for distribution.

The psychological studies program evaluates the effectiveness of museum exhibits and presentations, and measures visitor reaction to them. To assure production of significant and relevant data, the program requires development of measurement and evaluation techniques designed specifically for use in the museum environment. Studies cover such areas as exhibition techniques, methods of labelling, museum traffic flow, audiovisual devices which supplement exhibits, signage and other visitor orientation devices. In FY 1978 the program conducted an extensive series of meetings with most of the bureaus of the Institution to develop evaluation plans responsive to the most pressing needs of each, and initiated evaluation studies in several of the bureaus. Projects are designed to devise or identify specific steps for the improvement of exhibition and educational programs, or to produce information helpful in future program development. An example of the latter type of study is the new survey questionnaire developed for use by SITES in its communication with users of traveling exhibitions. In FY 1980, the psychological studies program will continue to conduct evaluations throughout the Institution dealing with specific museum needs. Tested evaluation methods and procedures will be shared with museums throughout the country as a form of technical assistance for the improvement of their own programs.

III. South Group Buildings Management: South Group Buildings Management is responsible for the cleaning, minor maintenance, labor services, relamping, special events and maintenance-contract administration for the Arts and Industries and the Smithsonian Institution Buildings, and for responding to urgent situations which may effect their maintenance. Because of the frequent use of the two buildings for a large number of special events, it is essential that high levels of maintenance be provided. Services are provided on a seven day per week basis.

IV. Office of Horticulture: The Office of Horticulture utilizes the disciplines of horticulture as an educational, scientific, research and display program for the Smithsonian Institution. The office performs a number of functions which include the provision of interior and exterior landscaping services, from design through installation and maintenance; research and development of historically-styled gardens and interior plantings; maintenance of Smithsonian grounds and care of trees; operation of a large greenhouse-nursery complex; and development and implementation of educational and display programs related to horticulture. The responsibilities of the crew include pest control and snow and ice removal from sidewalks. Each year the office provides more than 250 plant and flower arrangements for special events, develops 25 landscape exhibitions and rotates planting in 45 flower beds.

V. Office of International Activities: During FY 1978, the Office of International Activities, formerly a unit of the Office of International Programs, was assigned to the Assistant Secretary for Museum Programs. The office's companion unit, the Special Foreign Currency Program, was integrated with the new Office of Fellowships and Grants and assigned to the Assistant Secretary for Science. This administrative adjustment will provide additional support to the Office of the Assistant Secretary for Museum Programs, which has for many years been actively involved in international museological developments and organizations.

The Office of International Activities serves Smithsonian programs by advising on foreign affairs affecting Smithsonian museological, cultural and research programs, assisting in communications with foreign governments and institutions, investigating and reviewing opportunities for cooperation and participation in international projects important to Smithsonian professional staff, and contributing to the search for funds to support such projects. The office fosters exchanges among United States and foreign institutions and museum professionals and maintains liaison with the Department of State, the International Communications Agency, U.S. missions abroad, and foreign governments and their embassies in Washington, as well as with private institutions concerned with cooperative international programs. The office provides logistical support for Smithsonian scholars and their foreign collaborators by obtaining research, import and export permits and by arranging for passports and visas.

During FY 1978, the office worked closely with the International Communications Agency (ICA) to establish orientation programs on museological and research activities for new ICA officers and to those assigned to new posts abroad. In addition, the office arranged briefings for two Smithsonian groups travelling to the People's Republic of China, as well as for five groups from China who were visiting the Smithsonian. Also in FY 1978, the office managed the Smithsonian's participation in the ICA's Educational and Cultural Exchange, and assisted with arrangements for more than 200 official and other distinguished foreign visitors to the Institution.

EXPLANATION OF PROGRAM CHANGE:

Immediate Office, Assistant Secretary for Museum Programs - In FY 1978 information acquired during the initial surveys of museum training needs of Native American tribal museums and cultural centers was used effectively in conducting a workshop for tribal leaders and in setting up six internships for Native Americans who will work in tribal museums. This special aspect of the museum training program will continue in FY 1979. An additional amount of $4,000 is requested in FY 1980 for consultation and continuation of surveys of Native American tribal museum needs.

South Group Buildings Management - An increase of $21,000 is requested for the acquisition of essential janitorial supplies and contracting for certain services, such as trash removal, which are necessary to maintain properly both the Smithsonian Institution Building and the Arts and Industries Building. Other additional requirements, particularly overtime costs and costs associated with necessary part-time janitorial positions, will be met with funds reapplied as a result of the proposed reduction of two permanent janitorial positions.

Office of Horticulture - Additional resources of $140,000 are requested for FY 1980. Part of these funds will be used to meet new responsibilities assigned to the office: the maintenance of 26 acres of lawn and fencing at the Smithsonian property holdings at Silver Hill, Maryland and the care of areas surrounding Smithsonian museums on the Mall. Funds are also required for urgently needed horticultural and maintenance services such as trimming ivy on buildings, and supplies, and for essential repair and replacement of equipment. Finally, a very critical need provided for in this request is the proper care of trees on Smithsonian property, which includes pruning, trimming and spraying. Additional

requirements have already been met by the reduction of one gardener/assistant foreman position and the redirection of $20,000 of associated costs to expenses related to overtime and temporary positions resulting from snow removal, special events, parking lot cleaning and similar requirements which cannot be prescheduled.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--Funds are derived from fees paid by participants in the Office of Museum Programs workshops for lunches and for instructional materials; from proceeds from sales of tapes and slides on conservation theory and practice (these are sold at cost to interested museums and related educational organizations); from the sale of horticultural materials through the museum shops; and from allotments. The funds are used for supplies and equipment needed to continue training and conservation information programs; for horticultural materials; and for representational purposes, such as special events related to national and international museological activities. In FY 1978 a commemorative medal honoring the Silver Jubilee of Queen Elizabeth II was produced and distributed. Sales of this medal are not anticipated beyond FY 1979. All proceeds from the project were used for production and distribution costs. In FY 1979 an allotment of $25,000 was made for the purchase of an orchid collection.

Restricted Funds--These funds are provided by gifts from private foundations and individuals for specific purposes. The Armand Hammer Foundation, for example, provided an amount of $100,000 for the "Treasures of Mexico" exhibit that was administered by museum programs during FY 1978. (These funds were expended in FY 1978 and FY 1979.) A grant made in FY 1978 and FY 1979 by the Andrew Mellon Foundation on behalf of the National Conservation Advisory Council supported report publications. No funding is anticipated for FY 1980.

OFFICE OF THE REGISTRAR

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	4	100	-	-	-	-	-	-	-	-
FY 1979 Base	4	109	-	-	-	-	-	-	-	-
FY 1980 Estimate	4	110	-	-	-	-	-	-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	4	0	4
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	87	1	88
12 Personnel Benefits.....	8		8
21 Travel & Trans. of Persons....	3		3
23 Rent, Comm. & Utilities.....	5		5
24 Printing and Reproduction.....	1		1
25 Other Services.....	3		3
26 Supplies and Materials.....	1		1
31 Equipment.....	1		1
TOTAL	109	1	110

Analysis of Change

Necessary Pay.....	1
Program Funds.....	0

ABSTRACT - The Office of the Registrar is responsible for the Institutional development, oversight and coordination of information management for all museum objects and specimens held by the Smithsonian. The Registrar's office is charged with development of standardized systems for effective integration of the National Collections and with assisting the bureaus in the establishment of modernized information systems. No program increase is requested for FY 1980. Necessary pay in the amount of $1,000 is required for existing staff.

PROGRAM - From the 1880's until 1976, the Office of the Registrar provided centralized registration services for the Natural History and History and Technology collections. Through the years, centralized support of these collections had become antiquated and inadequate while little centralized support was being provided for other collections. Consequently, traditional registration functions were completely decentralized over a two-year period ending in 1976. At that time the emphasis was shifted from record keeping to systems improvement and the mission of the Registrar's office was expanded to provide support for all bureaus in the Institution.

Following the designation of collection inventory control as an urgent Institutional priority, this office developed the Smithsonian's policy and plan for conducting collection inventories in all museum bureaus. Coordination and monitoring of collection inventory processes have now become continuing responsibilities of the office. Members of the office staff assist individual museums to computerize their inventory results, with the goal of securing computerized inventory records for all Smithsonian collections by June, 1983. This effort is being pursued in concert with a related computerization program whose ultimate objective is the inclusion of inventory, cataloguing, registration and related data in computerized files which are compatible enough to permit exchange and consolidations of data for research or management purposes. In further support of these activities, the office will continue to conduct a seminar program, initiated in FY 1978, for the purpose of advancing the knowledge and skills of Smithsonian personnel in the information-management aspects of collections management. Continuing responsibilities of the office include managing the affairs of the Smithsonian Registrarial Council through which interbureau registrarial business is conducted and cooperative procedures are developed; and coordinating the work of the Institution's Collections Policy and Management Committee, which has expanded its activities and established a number of subordinate task forces to conduct specific projects. The office also maintains contacts with national and international organizations and associations concerned with applications of computers to collections management functions and with other museums involved with development of innovative automation processes.

CONSERVATION-ANALYTICAL LABORATORY

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	23	510	-	-	-	-	-	-	-	-
FY 1979 Base	23	720	-	-	-	-	-	-	-	-
FY 1980 Estimate	23	764	-	-	-	-	-	-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	23	0	23
Number of Other Positions.....	0	1	1
11 Personnel Compensation.....	467	24	491
12 Personnel Benefits.....	45	2	47
21 Travel & Trans. of Persons...	15		15
22 Transportation of Things.....	1		1
23 Rent, Comm. & Utilities.....	11		11
24 Printing and Reproduction....	10	1	11
25 Other Services.....	92	11	103
26 Supplies and Materials.....	40	5	45
31 Equipment.....	39	1	40
TOTAL	720	44	764

Analysis of Change

Necessary Pay.....	13
Program Funds.....	31

ABSTRACT - The Conservation-Analytical Laboratory (CAL) is responsible primarily for advising and assisting Smithsonian museums in preserving the National Collections. It provides a wide range of services for this purpose. For FY 1980, an additional $31,000 is requested to expand the program of monitoring environmental conditions throughout Smithsonian museums in order to assure the well-being of the National Collections. Necessary pay in the amount of $13,000 is required for existing staff.

PROGRAM - The Conservation-Analytical Laboratory was established in 1963 to serve the museums of the Smithsonian Institution. Staffed by conservators and scientists, the Laboratory provides an extensive range of expert services for the conservation and preservation of collections.

Since the environment in which collections are stored or exhibited is an extremely critical factor in their care, CAL monitors environmental conditions, advises on their

suitability for artifacts and specimens, and suggests remedial action if necessary. Commercial products proposed for prolonged contact with artifacts, such as fumigants used in storage, are tested and examined for their effects on the collections.

A major responsibility of the Laboratory is to provide conservation treatment for objects which cannot be treated locally, which present special problems, or which require more specialized equipment than is available in museum units.

The analytical functions performed by the CAL serve two major purposes. Analyses of objects or their materials, such as pigments, ceramics, fibers, alloys or corrosion products using advanced instrumentation serve to determine appropriate conservation procedures. Based upon such examination, advice and technical guidelines are given to curatorial units for precise conservation procedures appropriate for specific objects. Use of these analytical techniques to measure the specific characteristics of groups of objects and interpretation of the findings--a study known as archeometry--also enables the CAL to provide archeologists and historians with basic research data concerning dates, attribution, and earlier production methods. For example, pewter made in Scotland may prove consistently different in alloying elements from pewter made in France. Some of the analytical processes of archeometry utilize techniques and equipment available in the CAL; others require additional specialized and sophisticated equipment. In such instances, the CAL staff may utilize the electron microprobe in the National Museum of Natural History or the neutron activation facilities at the Brookhaven National Laboratory or the National Bureau of Standards. Archeometry requires detailed study of large numbers of objects of known provenance and therefore involves a partnership between archeologists or curators and the analytical scientists. A reflection of the increased activity in archeometry in FY 1978 is the publication funded by the CAL of the proceedings of the conference on the search for ancient tin, containing the papers presented at highly successful seminars held jointly with the National Bureau of Standards. During FY 1979, the CAL plans to publish, as the first in a new Smithsonian series devoted to archeometrical subjects, the papers to be presented at the conference on early pyrotechnology, scheduled for April, 1979.

To assure retention and accessibility of the information produced through its analytical and conservation efforts and to meet the increasing demand of conservators for current information, the CAL is continuing to develop its data processing system in cooperation with the Office of Computer Services. The system will provide rapid retrieval of data on tested procedures. During FY 1979, the CAL plans to expand its computerized information system by testing equipment to link the CAL to the data base at the British Museum Research Laboratory for reprint retrieval purposes. In addition, the CAL will cooperate with the Smithsonian Institution Libraries in the use of on-line bibliographic base services for rapid access to essential literature.

During FY 1978, the CAL made more than 100 contacts and analyses on environmental conditions, provided 4,800 technical guidelines in conservation procedures in response to 190 specific requests, treated 198 objects, and responded to about 100 requests for analyses from the museums and other bureaus of the Institution. The CAL staff maintained close contact with conservation organizations throughout the United States and abroad and made significant contributions to the field through consultations and symposia.

Recruitment of qualified conservators and scientists is a lengthy process made difficult by the limited number of persons fully qualified for the highly skilled and technical tasks which must be performed. Since the CAL does not anticipate reaching full staffing until later in FY 1979, some funds originally requested for personnel costs will be applied in FY 1979 to meet other needs, which include training activities, supplies, materials and equipment. A substantial effort will be made to prepare for the expansion of the CAL facilities in the planned Museum Support Center in Suitland, Maryland. The full staff complement is anticipated for FY 1980.

EXPLANATION OF PROGRAM CHANGE - In FY 1980 an additional $31,000 is requested for the operation of a much more extensive and detailed program for monitoring the environmental conditions in Smithsonian museums. Additional equipment and part-time assistance will be required to provide more careful monitoring of environmental conditions so that more reliable data can be gathered. In preparing for this expanded program, CAL has installed a weather-data system, which, when used in conjunction with detailed information on interior environmental conditions, will provide data needed for immediate and accurate response to changing conditions adverse to the collections.

SMITHSONIAN INSTITUTION LIBRARIES

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	97	2,204	7	144	-	-	-	-	-	-
FY 1979 Base	95	2,464	9	178	-	-	-	1	-	-
FY 1980 Estimate	96	2,594	9	168	-	-	-	2	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	95	1	96
Number of Other Positions.....	4	0	4
11 Personnel Compensation.....	1,574	54	1,628
12 Personnel Benefits.....	154	5	159
21 Travel & Trans. of Persons....	12		12
22 Transportation of Things.....	2		2
23 Rent, Comm. & Utilities.....	18		18
24 Printing and Reproduction.....	94	33	127
25 Other Services.....	133		133
26 Supplies and Materials.....	240	16	256
31 Equipment.....	237	22	259
TOTAL	2,464	130	2,594

Analysis of Change

Necessary Pay.....	48
Program Funds.....	82

ABSTRACT - The Smithsonian Institution Libraries provides library and information services to support the research, exhibits, public service and education programs of the Institution. In FY 1980, an increase of one position and $82,000 is proposed to meet the following needs: (1) to prepare for the implementation of a new automated cataloguing system (one position and $16,000); (2) to offset price increases of current subscription journals and allow for some additional journal subcriptions and book purchases ($33,000); and (3) to increase substantially the conservation measures applied to rare materials ($33,000). Necessary pay in the amount of $48,000 is required for existing staff.

PROGRAM - The Smithsonian Institution Libraries is a library system comprised of nine bureau libraries and six major branches, as well as many departmental library locations. Four independent bureau libraries are affiliated. The system is supported by a large central reference and interdisciplinary library and by reference, circulation, acquisitions, cataloguing, conservation and administrative services. The bureau library collections are especially strong in natural history, American ethnology and culture, tropical biology, decorative arts and design, astrophysics, and the history of science and technology, including the Dibner Collection of rare books and manuscripts. Collections in the history of aeronautics and astronautics are developing rapidly. The central library includes a superior collection of reference materials and has strong resources in ecology, explorations and the publications of learned societies.

In FY 1978 a study was undertaken to determine the future of catalogue records in the Smithsonian Institution Libraries in the light of major changes in the internationally accepted cataloguing rules and the announced closing of the Library of Congress card catalogue in January 1981. This study will continue throughout FY 1979 and lead to decisions on acceptance of the new rules and the conversion to machine readable catalogue records in FY 1980 and FY 1981.

New technology has enabled the Libraries to improve both acquisition procedures and control of materials. In FY 1978 a simplified means of recording materials through an abbreviated machine readable record was applied to several major collections of unrecorded materials. In FY 1979 this program is being extended to include additional materials. A machine readable short title catalogue of the Dibner Collection of rare books was completed in FY 1978. Since FY 1974 the Libraries has used the Ohio College Library Center's growing data bank which now consists of about four million records used to produce catalogue cards tailored to fit the specifications of individual libraries. This data is accessible through on-line terminals. In FY 1978 and 1979 the Libraries' use of the on-line cataloguing system was expanded to include cataloguing for Smithsonian Astrophysical Observatory and Smithsonian Tropical Research Institute bureau libraries, and to include journals. Using the on-line system, the growth of cataloguing backlogs will be eliminated by the end of FY 1979.

The automation of processing exchange materials will be completed in FY 1979. Automatic assignment of various control numbers and purchase order numbers will be initiated. A partial new accessions list was produced for the first time in FY 1978 as a by-product of the on-line cataloguing system and is now being produced monthly.

In FY 1978 the Libraries assumed administrative responsibilities for the museum reference center, a collection of bibliographic material related to museology; and the Cooper-Hewitt Museum bureau library was opened. Support for the library of the Museum of African Art will be planned during FY 1979. Book and journal support was increased for expanding programs for the museum reference center and for the Cooper-Hewitt Museum library. Following a careful study and survey of the Cooper-Hewitt Museum Library, which is rich in the subjects of decorative arts and design, a plan has been developed to increase cataloguing and improve organization of the collections. Because of the importance of these collections, in FY 1980 the Libraries will use existing resources to accelerate implementation of this plan.

Also in FY 1978 on-line searching of indexing and abstracting data bases was begun and as a result of its popularity has been expanded in FY 1979. The National Air and Space Museum bureau library published the International Handbook of Aerospace Awards and Trophies in FY 1978. The Dibner Library prepared several exhibits, including "Women Scientists," "Important Works in the History of Technology" and, jointly with the Folger Shakespeare Library, "Science and the Arts in the Renaissance." Partial inventories of collections were performed in several bureaus including the National Zoological Park, the Radiation Biology Laboratory, the Chesapeake Bay Center for Environmental Studies and the National Air and Space Museum. The program to identify rare materials and transfer them

to rare book rooms continued. The Libraries began to develop an extensive desiderata list for rare books appropriate to, but not in the collection.

The Libraries' conservation laboratory was opened and occupied in FY 1978 and repairs of rare materials by Smithsonian staff were increased to a rate of 250 volumes per year of fine restoration work. With the appointment of a handbinder, the Institution binding program for non-rare materials was re-established. Use of commercial binding services was also increased. The microfilming program for materials too brittle to be bound was resumed in FY 1979.

EXPLANATION OF PROGRAM CHANGE - In FY 1980, an increase of one position and $82,000 is requested to enable the Libraries to prepare for the implementation of a new cataloguing system, to keep up with higher prices of journals and books, and to increase conservation measures applied to rare materials.

The Libraries is preparing to implement a new format of catalogue records to supersede the present manual card catalogue. A study is being conducted to determine the most appropriate format, but based on the experience of other research libraries, it is anticipated that a computer-based system which can produce a transportable microfilm record directly from the computer will be chosen. This system will allow continuous accumulation of records and will allow the complete record of the Libraries' holdings to be replicated for use throughout the Institution. In FY 1980 systems design and testing will be undertaken in anticipation of full implementation in January, 1981 to coincide with the Library of Congress's adoption of the revised international cataloguing rules and the closing of its card catalogue. An increase of one position and $16,000 is requested to provide staff assistance for testing and conversion, to process data and to purchase necessary equipment (e.g. microfilm readers).

An increase of $33,000 will permit renewal of all current journal subscriptions, notwithstanding an estimated 10-12 percent cost increase, and allow for subscriptions to some new journals and the purchase of highest priority new books. Presently, a base amount of $445,000 is devoted to these purposes. Increased dependence on interlibrary loans for journals and books is not a viable alternative for providing immediate access to materials, especially in scientific disciplines. Furthermore, postal rates have increased as have charges by libraries for interlibrary loans. This request will also enable the Libraries to take advantage of the increasing availability of historical materials on microfilm, such as U.S. Patents, 1790 on, which assist in the identification of artifacts in the museum collections and of objects brought to the Institution for identification by other museums or private citizens.

The Libraries' conservator has reviewed the rare book collections for conservation needs and found that over 18,000 rare volumes require restoration work--5,000 of these volumes are in the library collection of the Cooper-Hewitt Museum alone. To make inroads in the conservation backlog, the work performed by the conservator (restoration of approximately 250 volumes a year) must be heavily supplemented by temporary staff if appropriately skilled individuals can be found, or by outside contracted services. Expert contracted restoration work averages about $200-300 per volume. An increase of $33,000 is requested to help meet critical rare book conservation needs and to supplement the $40,000 currently available for the rare book conservation program.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds are provided in the form of an annual allotment to cover the nine authorized positions and provide for travel, supplies, book binding and training. The Libraries traditionally has charged a portion of its expenses to Trust funds, reflecting the fact that the Libraries provide services to programs and offices which are funded from gifts, grants, contracts and other sources of funds.

Restricted Funds--These funds, provided from individual gifts for specific uses of the Libraries, are donated generally for acquisition and book binding purposes.

OFFICE OF EXHIBITS CENTRAL

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	50	1,141	-	-	-	15	-	(5)	-	-
FY 1979 Base	47	1,183	-	-	-	21	-	26	-	-
FY 1980 Estimate	47	1,199	-	-	-	6	-	30	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	47	0	47
Number of Other Positions.....	1	0	1
11 Personnel Compensation.....	986	14	1,000
12 Personnel Benefits.....	97	2	99
21 Travel & Trans. of Persons...	3		3
22 Transportation of Things.....	1		1
23 Rent, Comm. & Utilities.....	5	-1	4
24 Printing and Reproduction....	2	-2	
25 Other Services.....	30	-25	5
26 Supplies and Materials.....	50	28	78
31 Equipment.....	9		9
TOTAL	1,183	16	1,199

Analysis of Change

Necessary Pay.....	16
Program Funds.....	0

ABSTRACT - The Office of Exhibits Central (OEC) prepares exhibits and exhibit-related products for museums, bureaus, programs and other offices that do not have--or have limited--internal exhibit-producing capabilities. The OEC also provides specialized or supplementary assistance to all other bureaus and offices. No program increase is requested for FY 1980. Necessary pay in the amount of $16,000 is required for existing staff.

PROGRAM - The OEC designs, edits, produces, installs and maintains exhibits; makes films and models; and provides other specialized services to the museums, bureaus, programs and other offices of the Institution to support their exhibit and exhibit-related activities. These services multiply the capabilities and resources of units without full-time or specialized exhibits staffs. In addition to actual job performance, consultation and referral of certain work to other sources during especially busy periods are important parts of OEC operations. Highly specialized OEC capabilities include editorial services, motion-picture production, audiovisual presentation, lighting, freeze-dry taxidermy, and the

services of the models, plastics and restoration unit (specializing in museum uses of fluid, thermosetting and reinforced plastics).

In coordination with the Office of Museum Programs, the OEC also provides training in exhibition media and techniques in workshops for museum professionals worldwide. New techniques, systems, and procedures, used in exhibits fabrication, are reported to the museum community. The office also maintains relationships with government offices that have public exhibition responsibilities.

A major strength and value of the OEC lies in its ability to offer full or partial exhibition support depending on specific needs. From 30-second film "spots" for airing on PBS television to the sculpting and casting of a uniquely stylized portrait manikin of Rosalynn Carter, the OEC has worked in the full range of museum communication media.

During FY 1978, the OEC worked on more than 350 separate projects. Of these, over half were "parts" of exhibits or related activities of the museums, programs and offices of the Institution. Particular assistance was provided to the Smithsonian Institution Traveling Exhibition Service for which OEC worked on 31 exhibitions. Also during FY 1978, the OEC edited labels for several exhibits, freeze-dried over 200 mammals and thousands of insects, produced outdoor graphics for the Folklife Festival and built models for an exhibition on barnstorming.

The OEC has already started work on 16 traveling exhibitions that will be completed in the first half of calendar year 1979. Major installation work is scheduled for the National Museum of Natural History exhibition "Dynamics of Evolution" and castings of 11 portrait busts will be completed for the National Portrait Gallery. Also scheduled are workshops, a series of brochures, editing assignments for several Smithsonian offices and the production of models and accessories for several museums. Participation in the Folklife Festival is in the planning stages as are other activities for a variety of Smithsonian programs.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds are provided from tuition-sharing with local universities and sale of film prints. They are used to fund clerical assistance for the motion picture unit, miscellaneous expendable supplies and other office expenses, and travel related to consultation with other museums on exhibition techniques and developments.

Restricted Funds--Funds are received from Trust activities and private foundations for exhibit design and construction projects, and are used to maintain appropriate stock levels of materials and supplies required for such projects. In the future, such funds will be reported under the unrestricted special purpose category.

SMITHSONIAN INSTITUTION TRAVELING EXHIBITION SERVICE

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	6	154	15	575	-	-	-	-	-	45
FY 1979 Base	6	148	14	595	-	-	-	-	-	44
FY 1980 Estimate	6	152	14	684	-	-	-	-	-	11

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	6	0	6
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	112	10	122
12 Personnel Benefits.....	11		11
21 Travel & Trans. of Persons...	3		3
22 Transportation of Things.....	14	-6	8
25 Other Services.....	2		2
31 Equipment.....	6		6
TOTAL	148	4	152

Analysis of Change

Necessary Pay.....	4
Program Funds.....	0

ABSTRACT - The Smithsonian Institution Traveling Exhibition Service (SITES) provides carefully selected, well-designed and widely circulated traveling exhibits covering a diversified range of shows in the fields of art, design, science, technology, history and education. These include Smithsonian exhibits as well as exhibits organized and lent by numerous government agencies, individuals and organizations throughout the world. No program increase is requested for FY 1980. Necessary pay in the amount of $4,000 is required for existing staff.

PROGRAM - SITES is now in its 27th year of providing exhibition service to qualifying organizations in the United States. The exhibitions are complete productions and are accompanied by handling instructions, technical information, public affairs materials, suggested educational programs and, in many instances, catalogues. The Service is the largest of its kind in the United States and the only one that provides a broad program encompassing the diverse disciplines covered by the Smithsonian Institution.

Millions of individuals view SITES exhibitions each year through their local museums, galleries, and educational and cultural institutions. SITES also has become an essential

part of the program planning of thousands of exhibit-sponsoring organizations. Organizations benefit from traveling exhibitions directly by being able to book a traveling exhibition for a fraction of the cost that would be required were they to develop the exhibition themselves. During FY 1978 an average of 180 exhibitions were on tour at any given time. News of these exhibitions reached the 6,000 institutions on the SITES mailing list through UPDATE, the annual catalogue; SITELINE, the quarterly newsletter; and special mailings prepared by SITES. During FY 1978, 27 new shows joined the SITES program. Most of these (22) featured original objects; the remainder (5) consisted of panel exhibitions. Also in FY 1978 were 760 bookings of the shows on tour, attended by an estimated six million persons. Forty-seven states were served.

During FY 1979, it is expected that the number of exhibitions on tour will average 150. The decline in the total is attributed to the large number of panel shows that are being retired from tour; such shows were primarily developed in conjunction with the Bicentennial and have now exhausted their service potential. The number of bookings of shows is expected to remain constant.

In FY 1980 it is anticipated that exhibition strength will remain at 150 shows on tour, which will include approximately 30 new shows which will join the program. In response to exhibitors' requests, SITES is developing more object-oriented exhibitions. Approximately 90 percent of the exhibitions most recently produced feature original objects. Panel shows are also popular. These appear in a variety of formats particularly as "information core" panel exhibitions: those that enable exhibitors to expand the exhibition through the addition of local artifacts and/or programs.

The FY 1979 Federal base of six positions and $148,000 represents approximately 19 percent of SITES operating budget. The remainder is either self-generated through fees charged for the service, provided by Unrestricted Trust funds of the Institution, or by grants and contracts. Federal assistance received by SITES is essential for achieving the goal of the Traveling Exhibition Service. It helps assure that fees paid for exhibitions remain within the budgetary reach of most participating museums and galleries and it enables SITES to maintain a list of exhibitions that rent for $300 or less. This target makes it possible for hundreds--perhaps thousands--of potential exhibitors with limited financial resources to present exhibitions of high quality. It is precisely those organizations with limited financial resources that benefit most from Smithsonian traveling exhibitions, for they generally lack their own exhibition design and production capabilities. The growth in the number of these smaller organizations is astounding. SITES receives an average of 300 requests for information about its service each month; of that number, about 30 are added to the SITES mailing list. With the total number of organizations growing, the need for well-developed, low-cost exhibitions is more necessary than ever.

Exhibitions Toured By SITES

Based on Smithsonian Collections		Based on Other Sources	
FY 1978:	The Art of Scientific Illustration	FY 1978:	African Artists in America
	Close Observation: Selected Oil Sketches of Frederic E. Church		America's Architectural Heritage
	Exhibition Flight		Artists' Postcards
	Handicrafts of the Southeast		Birds of Prey: Paintings by Louis Agassiz Fuertes
	The Image of Urban Optimism		Charles Burchfield: The Charles Rand Penney Collection
	Korean Village in Transition: An Anthropological Field Trip		Daum: One Hundred Years of Glass and Crystal
	What's in a Map?		Dorothea Lange: Her Collection
FY 1979:	Subways, An Underground Exhibition		Embroideries by the Children of Chijnaya, Peru
	Louis M. Eilshemius: Selections from the Hirshhorn Museum and Sculpture Garden		The First 4000 Years: The Ratner Collection of Judaean Antiquities
	Crosscurrents		

Based on Smithsonian Collections

FY 1979: Pochoir
Flying for Fun
20th Century Sculptures and Drawings: Selections from the Hirshhorn Museum and Sculpture Garden

Based on Other Sources

FY 1978: French Folk Art
The Great West, Real/Ideal
Images of Earth from Space
New American Monotypes
One Man's Vision: The Graphic Work of Odilon Redon
Paper as a Medium
Portrait of America
Shaker Built
Sringar

FY 1979: George Grosz: Works in Oil
Reborn Buildings: New Uses, Old Places
Graphicas: Contemporary Latin American Prints
Sri Lanka: Four Contemporary Painters
Visionary Architecture
Polish Posters
Erte
Benny Motzfeldt: Norwegian Glass Pioneer
Inuit Sculpture
The Phillips Collection, In the Making: 1920-1930
Played with Immense Success
The Audiences of the Moon
Jouets Americains
American Drawings II

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds are derived from rental fees collected from museums, universities, historical societies and other users of the traveling exhibitions. The rental fees, supplemented by an allotment, support 14 positions and virtually all exhibition development costs including publications, materials, outside specialists and contractual services.

Federal Grants and Contracts--The funding in this category comes from various Federal agencies for the development and touring of specific exhibitions. The Department of Transportation provided an amount of $50,000 (expended in FY 1978 and FY 1979) for preparation, shipping and related touring costs of the Cooper-Hewitt Museum exhibit "Subways, An Underground Exhibition." It is anticipated that funding will decrease in FY 1980.

SMITHSONIAN ARCHIVES

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	13	303	1	24	-	-	-	-	-	-
FY 1979 Base	13	308	1	35	-	-	-	-	-	-
FY 1980 Estimate	13	334	1	36	-	-	-	-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	13	0	13
Number of Other Positions.....	2	0	2
11 Personnel Compensation.....	265	7	272
12 Personnel Benefits.....	25	1	26
21 Travel & Trans. of Persons...	3		3
24 Printing and Reproduction....	1	2	3
25 Other Services.....	9		9
26 Supplies and Materials.....	4		4
31 Equipment.....	1	16	17
TOTAL	308	26	334

Analysis of Change

Necessary Pay.....	6
Program Funds.....	20

ABSTRACT - The Smithsonian Archives is the official memory of the Smithsonian Institution and an important research resource for scholars working in the history of American science and culture. An increase of $20,000 is requested for FY 1980 for compact shelving, additional computer usage, and the preservation of photographic negatives. Necessary pay in the amount of $6,000 is required for existing staff.

PROGRAM - The overall goal of the Smithsonian Archives program is to preserve valuable archival documentation created by the Institution and to provide access to this body of archival documentation to administrators, scholars and scientists. Archives also are used to document the Smithsonian's specimen collections. Much of the archival documentation is sent to the Archives for processing and storage, but a large amount also remains in administrative or curatorial offices. Accordingly, the Archives provides access through centralized information systems to documentation that must remain dispersed physically.

Currently some 30 percent of the approximately 40 million documents that comprise the archival resources of the Institution are in the physical custody of the Archives. An additional 30 percent dispersed throughout the Institution are accessible through the Archives' central information systems. The remaining 40 percent have not yet been brought under archival control.

During calendar year 1978, the Archives published a new Guide to the Smithsonian Archives, which includes descriptions of over 400 record units totalling some 8.5 million documents; and a Guide to Manuscript Collections in the National Museum of History and Technology, which contains descriptions of 357 manuscript collections totalling some 14 million documents. The guides are designed to make the archival and manuscript holdings of the Smithsonian Institution available to the public. Other achievements in FY 1978 include: microfilming of some 117,000 images; survey of some 1.1 million documents in the Hirshhorn Museum and Sculpture Garden; authorization of the destruction of some 1.8 million documents of the Accounting Division, the Smithsonian Federal Credit Union, and other offices in accordance with Federal records schedules; the transfer of almost 2 million documents to the Archives from Smithsonian offices and bureaus; some 12 interviews in the Archives part-time oral history program; and response to 857 reference requests and 736 requests for retrieval from accession records.

Major efforts during FY 1980 will be: the establishment of archival programs for the Smithsonian's art museums; completion of work on the backlog of records from the National Museum of Natural History and the National Museum of History and Technology; establishment of an archival and records management program for the Smithsonian Astrophysical Observatory; and the elimination of a sizable portion of the 2.7 million document backlog in the central Archives.

EXPLANATION OF PROGRAM CHANGE - The Smithsonian Archives requests an increase of $20,000 for collections management purposes. The funds will be used for: (1) the installation of compact shelving to maintain a rate required to contain annual accessions averaging some 1.6 million documents ($16,000); (2) increased use of computers in the effort to provide centralized document accessibility for all archival resources of the Institution ($2,000); and (3) preservation copying of important photographic negatives that have a volatile nitrate base ($2,000).

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds are provided in the form of an annual allotment to cover the salary of an archivist and support costs. This allotment reflects the provision of archival services to the non-appropriated Trust activities of the Institution.

NATIONAL MUSEUM ACT

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	3	793	-	-	-	-	-	-	-	-
FY 1979 Base	3	797	-	-	-	-	-	-	-	-
FY 1980 Estimate	3	798	-	-	-	-	-	-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	3	0	3
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	53	1	54
12 Personnel Benefits.....	5		5
21 Travel & Trans. of Persons...	9		9
24 Printing and Reproduction....	6		6
25 Other Services.....	8		8
26 Supplies and Materials.....	1		1
31 Equipment.....	1		1
41 Grants.....	714		714
TOTAL	797	1	798

Analysis of Change

Necessary Pay.....	1
Program Funds.....	0

ABSTRACT - The National Museum Act (NMA) is a technical assistance program under which grants are made for specific proposals to enhance the quality of museum operations by increasing the opportunities for training individuals to perform museum work, encouraging research and special studies for improvement of museum methods and practices, and assisting in the dissemination of technical information to the museum profession. No program increase is requested for FY 1980. Necessary pay in the amount of $1,000 is required for existing staff.

PROGRAM - Funds appropriated to the Smithsonian Institution for implementation of the National Museum Act are granted to museums, professional museum-related associations, and universities for projects which meet the standards and objectives set by the Act. The National Museum Act Advisory Council, appointed by the Smithsonian Institution, advises and assists the Secretary in determining priorities and assessing the quality of projects for which support is requested under the Act. The membership of the Advisory Council encompasses the principal museum disciplines--art, science and history--and broadly represents all regions of the United States. Only those proposals which demonstrate thoughtful

planning, careful structure and sound administration are recommended for support by the Advisory Council.

Since the program's inception, grants have been provided for fellowships, internships, seminars and workshops, and travel-study projects, many of them concentrating on studies in museum conservation. The Act has enabled professional museum organizations and associations to offer improved technical services to museums and their employees and has contributed to studies and research resulting in more effective museum performance and more advanced conservation practices.

In FY 1978, 179 applications for support were received and reviewed, and 79 grants totalling $721,000 were made. Of these, 34, for a total of $339,000, were related to museum conservation training and research activities.

Following the first grant application submission deadline in FY 1979, 108 applications were reviewed at the November, 1978 Advisory Council meeting and 47 grants totalling $460,000 were awarded. Eleven were designated for seminar workshop activities, 17 for conservation studies, nine for museum internship programs, nine for graduate professional museum education and training, and one for special studies and research. These grants were distributed among 17 individuals, 12 educational institutions, nine professional organizations, eight museums, and one state preservation office. An additional 75 applications, submitted under the travel/study, professional assistance, and special studies and research programs will be reviewed in March, 1979.

In order to coordinate efforts and to meet, insofar as possible, the increasingly complex needs of museums, staffs of the National Museum Act and of the Office of the Assistant Secretary for Museum Programs work closely with individuals, museums, educational institutions and professional organizations involved in museum training and research activities. The NMA also consults regularly with Federal programs which assist museums and participates in the deliberations and activities of the Working Group on Museum Policy of the Federal Council on the Arts and Humanities.

Continuous liaison is maintained with the National Conservation Advisory Council (NCAC), funded by the Act, whose aim is to assess the nation's needs in conservation training, research and facilities, and to identify the most effective means of meeting those needs. During FY 1978, the report of the Study Committee of Libraries and Archives was issued, as was a discussion paper on a national institute for the conservation of cultural property. Reports on conservation education and training and on scientific support for conservation will be published in FY 1979. Major activities planned for FY 1980 include the preparation of a formal proposal to create a national institute for conservation and the development of a comprehensive plan to identify and quantify the types and numbers of cultural materials in urgent need of conservation in the United States. Through its Committee on Regional Centers, the NCAC will continue its evaluation of regional conservation centers and publish a second report which addresses significant questions on conservation issues which have surfaced within the past two years.

SMITHSONIAN INSTITUTION SPECIAL PROGRAMS

These special programs make use of total Institutional resources, including staff research competence and collections, and encourage interbureau or interdisciplinary cooperation. They produce outstanding scholarship, presentations and additional opportunities for public education. Special programs include:

--The American Studies and Folklife Programs coordinate the study and presentation of the material aspects of American civilization and the traditional folk cultures of the United States. This program provides a focal point for these areas dispersed in several bureaus.

--The International Environmental Science Program coordinates the special capabilities of the Smithsonian's science bureaus to study complex biological processes to better understand them so that solutions to national ecological problems can be determined.

--The Academic and Educational Programs' offices conduct interdisciplinary seminar series, coordinate educational programs for students at the elementary and secondary school levels, provide opportunities for outstanding pre- and postdoctoral investigators to work at the Institution using staff and collections resources, and administer the Smithsonian's Research Awards and Special Foreign Currency Programs of research grants.

--The Smithsonian Research Awards Program enables the Institution to fund new and innovative research projects through a competitive selection process that involves rigorous scientific peer review. The Program is now administered by the Office of Fellowships and Grants in accordance with all applicable Federal personnel and procurement procedures.

--The Collections Management/Inventory Program represents a comprehensive effort to achieve full inventory control of the Smithsonian collections. This centralized program has been established as a supplement to individual museums' continuing programs to assure effective coordination of inventory work and to address the most urgent and critical needs.

SPECIAL PROGRAMS

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	24	1,614	11	227	3	41	2	39	4	60
FY 1979 Base	25	2,098	10	834	-	7	2	45	-	44
FY 1980 Estimate	25	2,287	10	991	-	25	-	63	-	-

*FTP = Full-time permanent positions

Analysis of Change (Federal Request)

Necessary Pay..... 13
Program Funds..... 176

Increases totalling $176,000 are requested for several programs and units funded in this category. For Research Awards an amount of $60,000 is requested to bring total resources for this program to $457,000 (including an amount of $7,000 proposed in the FY 1979 pay supplemental request) which will allow for the continuation of this vital means of sustaining new research approaches under rigorous, impartial outside review. For the Folklife Program, a proposed increase of $100,000, combined with the Folklife Festival's Federal base of $100,000 and a Trust fund base of $150,000, will bring the Festival's FY 1980 base to $350,000. This base will provide financial stability and permit more comprehensive planning to enhance the quality of its presentations. A small increase ($16,000) is requested for Academic and Educational Programs to provide additional educational materials and adequate resources for routine office expenses. A permanent base reduction of $435,000 was effected in this line-item in FY 1979 as a result of the decision by the Board of Regents to finance the Institution's Visiting Research (Fellowship) Program, which falls under the auspices of Academic and Educational Programs, entirely with non-appropriated Trust funds. Finally, an amount of $500,000 is requested for FY 1980, the same amount appropriated for FY 1979 to continue supporting the Institution's high priority collections management/inventory program. An amount of $13,000 is required for necessary pay.

The sources and uses of non-appropriated Trust funds are explained individually for each line-item in the Special Programs category that receives non-appropriated funds.

AMERICAN AND FOLKLIFE PROGRAMS

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	4	276	8	134	3	30	2	16	4	60
FY 1979 Base	4	360	8	300	-	4	2	31	-	44
FY 1980 Estimate	4	461	8	352	-	22	-	50	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	4	0	4
Number of Other Positions.....	10	1	11
11 Personnel Compensation.....	207	10	217
12 Personnel Benefits.....	19	1	20
21 Travel & Trans. of Persons....	11		11
22 Transportation of Things.....	3	2	5
23 Rent, Comm. & Utilities.....	5	6	11
24 Printing and Reproduction.....	30	11	41
25 Other Services.....	71	50	121
26 Supplies and Materials.....	14	9	23
31 Equipment.....		9	9
42 Insur. Claims & Indem.....		3	3
TOTAL	360	101	461

Analysis of Change

Necessary Pay.....	1
Program Funds.....	100

ABSTRACT - The American Studies and Folklife Programs have engaged in the study of the material aspects of American civilization and the traditional folk cultures of the United States. For FY 1980, a program increase of $100,000 is requested in support of the Festival of American Folklife in order to give the program financial stability and to permit more comprehensive advance planning to enhance the quality of the presentations. Necessary pay in the amount of $1,000 is required for existing staff.

PROGRAM - The American Studies and Folklife Programs have a long-range commitment to the preservation and revitalization of sectors of American culture whose existence is endangered by the encroachment of the institutions of advanced technology. The underlying program goal is the protection of endangered cultural species and the maintenance of traditional

alternatives in aesthetic values and artistic styles that characterize the rich variety of American sub-culture. This can be accomplished by focusing scholarly and public attention on the richness of surviving traditions and on the problems of cultural erosion. Three areas of activity are pursued to meet these goals:

--research, including documentation and publication;
--exhibition, consisting of festivals, museum programs and shows prepared for SITES; and
--cooperative efforts, involving graduate and undergraduate courses for the District of Columbia consortium of universities, the cooperative program with the Arts Endowment and the Library of Congress, and the Smithsonian National Associates training program.

Research--In FY 1978 two technographic films with an accompanying monograph on traditional Anglo-American potting techniques and on Ojibwa drummaking were completed. A series of four videotapes with accompanying instructional manuals on the subject of children's singing games and lore was prepared using materials from the Festival's Children's Area presentations. Three additional tapes and a final monograph for this project will be completed in FY 1979.

Also for FY 1979, planned activities include the continued documentation of data amassed in the 12 years of Festival production (of which 140,000 feet has already been sound-synchronized and logged, and a working archive of sound tape recording and videotape has been established); finishing of a monograph and accompanying research film of British ballad styles; and the completion of a film on open market vendors in the District of Columbia.

Projects for FY 1980 include production of footage and a monograph on the practice of folk medicine to supplement film taken in FY 1978; production and distribution of a videotape on techniques for the presentation of living cultural traditions in a museum context; and publication of a book on folklife in the District of Columbia, a manuscript on traditional narrative performance, and monographs on American ethnicity, folklife in the museum, street criers, sleeping-car porters, applied folklore and American music.

The Folklife Program staff also is collaborating on a series of essays on folklife, fieldwork techniques, and presentation of folklife subjects. These essays will be designed to be used by teachers as aids in orienting their students to folklife subjects in general and to Smithsonian Festival presentations in particular. Each essay on a particular folklore subject will make specific recommendations for classroom methodologies and lesson plans. Additionally, the Folklife Program has produced and edited a manuscript, to be published by the California Folklore Society, which outlines contemporary approaches to occupational folklife.

Exhibition--The Festival of American Folklife was produced in October, 1978 with presentations in three museums (the National Museum of Natural History, the National Museum of History and Technology and the Renwick Gallery) and on the Mall at the Washington Monument grounds. The Folklife Program is planning for a major programmatic change in 1979: the initiation of a "Folklife in the Museum" program to precede an all-outdoor Festival. For the past two years, the Folklife Program has taken the Festival into the museums. These programs have added a new dimension to the established exhibits and have proven very popular. However, spreading the Festival out among three museums and the Mall has created some confusion in the public's mind and logistical problems for the Festival's staff. The proposed solution is to hold a series of presentations in one museum during the week prior to the Festival. The Festival would then take place entirely on the Mall the following week.

Last year, in order to increase the educational value of the Festival, pre-Festival teacher orientation workshops were held for Washington area school teachers. Materials for preparing classes for Festival visits were produced and distributed, and discussions were held on ways of working with oral traditions in the classroom. On the basis of the success of these orientations, the Folklife Program staff is collaborating on assembling a series of essays on folklife topics to be used as teaching aids by teachers wishing to orient

their students to folklore, fieldwork techniques, and living-museum presentations. These essays will be used in connection with the 1979 Festival's orientation sessions. In conjunction with the Office of Museum Programs, a week-long workshop is being organized for museum professionals around the U.S. who wish to learn how to present living culture within their museums. This workshop will span a few days of both the "Folklife in the Museum" program and the Festival. The workshop will address itself to four questions: how are presentation topics chosen; how is fieldwork accomplished; how are presentation formats arrived at; and what is learned from the presentation.

Cooperative Efforts--During FY 1978 several field research projects were undertaken in Nevada to identify areas where community-based folklife projects would prove productive. This folklife survey was carried out in cooperation with the American Folklife Center at the Library of Congress and the Folk Arts Program at the National Endowment for the Arts. As a result of last year's fieldwork, a statewide conference on folklore topics in Nevada is being considered for late 1979 or early 1980. In addition, four small fieldwork presentation projects will be organized in Nevada: in Reno (on the Mexican-American Cinquo de Maio celebration); in Elco (on how to do fieldwork for and presentations of traditional craftsmen); in Fallon (to aid the Portuguese-American community in re-establishing a traditional "Festa"); and in Ely (on organization of Yugoslav or other multi-ethnic presentations). Other cooperative projects include a series of lectures and workshops on family folklore subjects in conjunction with the Smithsonian National Associates, and undergraduate and graduate courses in folklore taught by the Smithsonian staff under the auspices of the American Studies Department at George Washington University.

The remainder of resources identified with the American Studies and Folklife Programs is used by the Office of American Studies to engage in cooperative educational programs at the graduate level with universities to study the material aspects of American culture. This program makes available to the universities the unique Smithsonian facilities as well as staff expertise.

EXPLANATION OF PROGRAM CHANGE - For most of its 12-year history the Festival of American Folklife has relied for its financing on annual fund raising efforts on the part of the Smithsonian staff. Funds have come from a wide range of contributors: from private corporations and foundations, and government agencies, to individuals. This process, though usually successful in the end, has made coherent planning for the Festival very difficult because its financial base has been insecure and subject to the unpredictability of such grants. Beginning in FY 1979, the Smithsonian is committing some of its non-appropriated Trust funds to help stabilize the Festival's funding base. This will continue to be the case in future years. For FY 1980, this non-appropriated Trust fund support will total about $150,000. At the same time, an additional $100,000 in Federal funds is requested for FY 1980. The total resources available to the program will then total $350,000; $200,000 in Federal funds and $150,000 in Trust funds. The program thereby would be provided with the stability of funding it desires. Moreover, a stable funding base would permit more comprehensive advance planning to enhance the quality of presentations offered to the public.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--Substantial funding is provided in the form of an annual allotment to provide support for a staff of eight employees who administer the research, production and performances at the annual Folklife Festival. The increase in FY 1979 and FY 1980 is designed mainly to support Festival expenses and to give the program increased stability.

Restricted Funds--Funds are provided in the form of grants from private foundations, gifts from individuals, and reimbursements from local universities. These funds cover the costs of guestlecturers, course-related expenses, publication costs of the Folklife Festival programs, and projects involving film documentation of anthropological and folklore subjects.

Federal Grants and Contracts--In the past funds have been received from various Federal agencies such as the Department of Commerce, Department of Labor and Bureau of Indian Affairs, for support of exhibitions and performances at the annual Festival. No such funding currently is anticipated for FY 1980.

INTERNATIONAL ENVIRONMENTAL SCIENCE PROGRAM

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	2	367	-	-	-	-	-	-	-	-
FY 1979 Base	2	394	-	-	-	-	-	-	-	-
FY 1980 Estimate	2	397	-	-	-	-	-	-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	2	0	2
Number of Other Positions.....	11	0	11
11 Personnel Compensation.....	190	3	193
12 Personnel Benefits.....	18		18
21 Travel & Trans. of Persons....	35		35
22 Transportation of Things.....	4		4
23 Rent, Comm. & Utilities.....	5		5
25 Other Services.....	116		116
26 Supplies and Materials.....	16		16
31 Equipment.....	10		10
TOTAL	394	3	397

Analysis of Change

Necessary Pay.....	3
Program Funds.....	0

ABSTRACT - The International Environmental Science Program (IESP) is designed to coordinate the special capabilities of the Smithsonian's science bureaus to study ecosystems which are subject to human disturbance in order to evaluate and ultimately predict the consequences of changes to the environment. The International Environmental Science Program was established in FY 1976 by coordinating the Environmental Science Program--a multi-bureau interdisciplinary effort to monitor ecosystems at two permanent Smithsonian research facilities (the Tropical Research Institute in Panama and the Chesapeake Bay Center for Environmental Studies in Maryland)--and the International Environmental Program, also an interdisciplinary multi-bureau effort aimed at studying ecosystems in the tropics and subtropics. No program increase is requested for FY 1980. Necessary pay in the amount of $3,000 is required for existing staff.

PROGRAM - The Smithsonian Institution is uniquely qualified to undertake the research of ecosystems since it has both traditional expertise in international environmental research and the capability to sustain scientific programs on the long-term basis necessary. The team-oriented approach to research used in this program allows the individual investigator considerable freedom, consolidates the environmental research at the Smithsonian, composed of as many as 50 separate projects, and maximizes the use of available resources. Such an approach allows the program to draw upon the staff of the various science bureaus, allowing scientists to pursue interbureau, interdisciplinary research without sacrificing the traditional methods of a single bureau. By emphasizing the study of tropical and subtropical ecosystems, the Smithsonian will be able to undertake further studies on the development of new energy sources, natural resource management and new food alternatives. These studies, in turn, will continue to make important contributions to the better management of endangered species (including plants) and their critical habitats. An external review committee, established in FY 1978, composed of scientists both within and outside of the government, familiar with monitoring programs, concluded that the Smithsonian's Environmental Science Program, is uniquely qualified among the Federal agencies supporting basic biological research to undertake the critical study of long-term biological issues.

Staff resources consist primarily of specialists from the National Museum of Natural History, the National Zoological Park, the Radiation Biology Laboratory, the Tropical Research Institute, and the Chesapeake Bay Center for Environmental Studies, as well as faculty and pre- and postdoctoral students from United States universities and research organizations abroad. The most intensive and detailed studies, at the Tropical Research Institute and at the Chesapeake Bay Center for Environmental Studies, are concerned with the responses of plant and animal populations and communities to relatively long-term fluctuations in their biotic and abiotic environments. Specific examples of work in progress include the responses of insect communities to seasonal changes in rainfall and humidity; the effects of arthropod diversity and stability of agriculture, grazing and other modes of human disturbance; the effects of storms and unusual tidal conditions on populations of estuarine and intertidal organisms; and long-term impact of environmental contaminants on plant growth and community diversity.

At the non-permanent sites in the tropics, research is keyed generally to the understanding of problems of species depletion, forest exploitation and the role that diminished habitat plays in the survival of species. Research studies are designed to contribute to the better management of endangered species and parks. IESP work is being conducted on: tropical diversity in the highlands at Wau, Papua New Guinea; broad scale theoretical and environmental monitoring in the Amazon region; comparative ecological analysis of savanna and forest sites in northern and central Venezuela; an ecological study of the dynamics of Royal Chitwan National Park in the terai of Nepal; and selected marine areas in the Philippines. Two significant studies concerning behavior and social dynamics of the tiger will be published in FY 1979 as will a volume on findings of the studies carried out in Venezuela. These publications will lay a solid foundation for future ecological work in these areas.

In FY 1979, a major volume will be completed summarizing the tropical work conducted over the past five years and a volume of collected papers will be completed detailing the work that has been done on temperate areas. A detailed plan is being developed at this time for the next five-year phase of this program in order to continue monitoring forest and watershed ecosystems essential to predict environmental change.

ACADEMIC AND EDUCATIONAL PROGRAMS

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	18	868	3	93	-	11	-	23	-	-
FY 1979 Base	19	447	2	534	-	3	-	14	-	-
FY 1980 Estimate	19	472	2	639	-	3	-	13	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	19	0	19
Number of Other Positions.....	0	0	0
11 Personnel Compensation.....	341	10	351
12 Personnel Benefits.....	32	1	33
21 Travel & Trans. of Persons....	11		11
23 Rent, Comm. & Utilities.....	2		2
24 Printing and Reproduction.....	47	11	58
25 Other Services.....	7	1	8
26 Supplies and Materials.....	5	2	7
31 Equipment.....	2		2
TOTAL	447	25	472

Analysis of Change

Necessary Pay.....	9
Programs Funds.....	16

ABSTRACT - Research and education are among the principal objectives and responsibilities of the Smithsonian. To foster and stimulate the pursuit and dissemination of knowledge the Institution has promoted scholarly and academic ties with other learned institutions since its establishment, and has offered its resources for learning--its collections, professional staff, libraries and laboratories--to the general public and to the academic community. These ties are developed and maintained through competitive awards for research projects, programs in higher education, symposia and seminars, and activities at the elementary and secondary levels.

In FY 1980, an increase of $16,000 is requested to meet the following requirements: (1) $5,000 to provide an adequate amount for office expenses of the Office of Symposia and Seminars;

and (2) $11,000 to support additional educational materials developed by Office of Elementary and Secondary Education. A permanent base reduction of $435,000 was effected in FY 1979 as a result of the decision by the Board of Regents to finance the Institution's centralized Fellowship Program entirely with non-appropriated Trust funds. Necessary pay in the amount of $9,000 is required for existing staff.

PROGRAM - I. Office of Fellowships and Grants: The Office of Fellowships and Grants was established in FY 1978 by combining the resources of the former Office of Academic Studies and a part of the former Office of International Programs to consolidate management of all Smithsonian fellowship offerings and related academic programs; the Smithsonian Research Awards Program supporting innovative research by Smithsonian scientists and scholars; and the Special Foreign Currency Program offering grants to American institutions including the Smithsonian itself for research in "excess" foreign currency countries. These programs were administered previously by separate organizations: the Fellowship Program by the former Office of Academic Studies; the Research Awards Program by the Office of the Assistant Secretary for Science; and the Special Foreign Currency Program by the former Office of International Programs. Resources for administering these programs are included here as are estimates of direct costs of the Fellowship Program. Estimates for direct costs of the Smithsonian Research Awards Program are presented as a separate line-item under Special Programs, and estimates fordirect costs for the Special Foreign Currency Program are presented in the request for Museum Programs and Related Research.

II. Academic Programs: The National Collections in the Smithsonian care, and the scholars of humanities and science who curate and study them, represent unparalleled resources for specialized study in many disciplines. These resources can not be duplicated at any university and consequently may be essential to the success of many scholars' research efforts. In universities and colleges, education relies heavily on the study of library material and reproductions of artifacts. By contrast, at the Smithsonian students work directly with historical and anthropological objects, original works of art, natural history specimens, living animals and plants, and ecological systems, in the museums, at the National Zoological Park, and in the field. For these reasons, the Smithsonian's resources offer an important adjunct to university education. The Institution recognizes its responsibility to make these resources available to students and scholars throughout the country.

To meet this responsibility the Smithsonian offers fellowships through the Smithsonian Visiting Research Program, which is supported now with non-appropriated Trust funds designated for the Office of Fellowships and Grants, and through special programs developed at the bureau level, supported by appropriated and non-appropriated funds designated for the bureaus. The Visiting Research Program is the core of the Institution's efforts to insure that its full range of resources are made available to the academic community; the bureau-level programs are devised to present opportunities for study and training that relate principally to the resources of a particular bureau or program.

The fellowship offerings are considered by the national academic community and the Smithsonian's research staff alike to be a vital part of the Institution's endeavors. Pre- and postdoctoral fellowships are awarded to young scholars for advanced research training under the guidance of senior Smithsonian staff members. Senior fellowships are awarded for research in association with Smithsonian colleagues.

Smithsonian fellowships are awarded only after a rigorous competition involving evaluation by outside referees and Smithsonian professional staff members. Those who do receive fellowships are some of the most promising rising scholars in their fields and distinguished visitors of proven accomplishment. They provide a valuable intellectual stimulus to the work of the Smithsonian's own curators and scientists, offering new ideas and helping keep the staff current with the latest developments in their fields. Many lasting collaborations are begun during a fellowship year and sustained through correspondence, visits and joint publications. Staff members are enthusiastic about the program, and commit substantial time and effort to its success. At present some 350 staff members

have expressed the desire to work with Fellows and are active each year in the review of applications.

The Smithsonian's experience with the Fellows during their residency has been extremely positive, and their later performance as professionals in teaching, research and public service has been exemplary. Past Fellows are regularly contacted after several years to learn the long-term results of their study at the Smithsonian. Extensive publication is common. More than half the Fellows pursue teaching careers in academic institutions, and most others enter government and industry. Since 1965 Smithsonian fellowships have supported over 600 pre- and postdoctoral Fellows in the Visiting Research Program and some 125 Fellows in other programs.

III. Office of Symposia and Seminars: The Office of Symposia and Seminars designs interdisciplinary programs for the better understanding of intellectual developments in many fields of current research. Plans are underway for the Institution's seventh international symposium in 1981, an examination of the biological and cultural factors in human adaptation and their significance for the future. Bridging the sciences and humanities, the symposium will follow in the series that has produced four major symposia and a variety of important published education material (i.e., Man and Beast, The Cultural Drama, The Nature of Scientific Discovery, and Kin and Communities: Families in America). Continuing also will be the "Voluntarism and the Public Interest in American Society" seminar series (entering its seventh year in 1980) as well as a range of resources services to universities, foundtions and government groups. Special seminars are planned to bring together technology, culture, art and society as a grouping of concepts and research interests. Two are planned for FY 1979 to commemorate both the International Year of the Child and the Einstein Centennial. Materials will be prepared for publication after 1979 based on the other, smaller seminars, and related activities will be organized, as well, within the framework of interdisciplinary exchange between the humanities and sciences.

IV. Office of Elementary and Secondary Education: A major objective of the Office of Elementary and Secondary Education is to make Smithsonian resources for learning available to both the local and national school communities. Program activities include planning and conducting teacher workshops, developing audiovisual materials, preparing school publications, conducting a summer program for high school students and coordinating the Smithsonian's educational activities for the disabled.

To encourage cooperation and exchange of information among the Smithsonian education offices and between those offices and local schools, the office continues to offer a number of programs. Two publications--Let's Go (a monthly newsletter) and Learning Opportunities for Schools (an annual brochure) --are used to inform teachers about the variety of Smithsonian services and suggest ways of using museums as educational resources. A workshop and seminar program for teachers is now in its eighth year. During FY 1978 more than 1,800 teachers participated in 68 workshops and seminars, including five summer courses enabling the development of curriculum units based on Smithsonian resources. Continuing summer workshops include an orientation program; several one-week seminars on museum teaching methods; and a three-week course "The 19th Century Through Smithsonian Collections."

To share these same teaching concepts with a national teacher audience Art to Zoo (a classroom newspaper) is distributed without cost to over 12,500 schools and 50,000 teachers throughout the United States. A new 17 minute film entitled Museums: Where Fun Is Learning has been prepared to show how students in a museum can actively learn. A slide/cassette kit, "The Museum Idea," which illustrates the concept of what is a museum and demonstrates how a museum can be developed in a classroom, will soon be available for elementary school teachers.

EXPLANATION OF PROGRAM CHANGE:

Office of Symposia and Seminars ($5,000) - An amount of $5,000 is sought to provide adequate funds for the functioning of this office. Base resources available to the Office of Symposia and Seminars ($61,000) have become insufficient to support the three staff members; little or no funds are available for routine office expenses. The funds requested will be used to purchase office supplies and equipment and to provide sufficient funds for staff salaries.

Office of Elementary and Secondary Education ($11,000) - An amount of $11,000 is requested for publication, production and operating costs associated with planned program improvements in FY 1980. These include a pilot publication for children in the form of supplement to the newspaper Art to Zoo; an additional workshop series; and a slide/cassette kit for high school students based on the Smithsonian's anthropology collections.

In addition, a permanent base reduction of $435,000 was effected in FY 1979 as a result of the decision of the Board of Regents to finance entirely with non-appropriated Trust funds the Institution's centralized Fellowship Program which was formerly funded from appropriated funds.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose--The major portion of these funds in FY 1979 and FY 1980 ($435,000) are designated for the Institution's centralized Fellowship Program, previously supported with appropriated funds. An additional amount of $100,000 is included in FY 1980 to support a new Regents' Fellowship Program for Visiting Scholars who are distinguished in their fields. The remaining funds are provided by an allotment to support the salaries of the director of the Office of Symposia and Seminars and a staff member of the Office of Fellowships and Grants; and travel and support costs associated with certain programs of these offices, such as the FY 1979 seminar commemorating the celebration of the International Year of the Child.

Restricted Funds--These funds, provided by tuition fees received from local universities, are used to pay stipends and fund miscellaneous office supplies. In the future, such funds will be reported under the unrestricted special purpose category.

SMITHSONIAN RESEARCH AWARDS PROGRAM

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	-	103	-	-	-	-	-	-	-	-
FY 1979 Base	-	397	-	-	-	-	-	-	-	-
FY 1980 Estimate	-	457	-	-	-	-	-	-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	0	0	0
Number of Other Positions.....	5	0	5
11 Personnel Compensation.....	81		81
12 Personnel Benefits.....	8		8
21 Travel & Trans. of Persons....	95	10	105
22 Transportation of Things.....	4		4
23 Rent, Comm. & Utilities.....	9		9
24 Printing and Reproduction.....	2	2	4
25 Other Services.....	80	18	98
26 Supplies and Materials.....	68	15	83
31 Equipment.....	50	15	65
TOTAL	397	60	457

Analysis of Change

Necessary Pay.....	0
Program Funds.....	60

ABTRACT - The Research Awards Program was initiated in FY 1966 to fund new innovative research projects. Since then, over 500 such projects have been funded through this program, resulting in some 675 publications. An increase of $60,000 is requested for FY 1980 to allow the continuation of this vital means of sustaining new research approaches under rigorous, impartial outside scientific review.

PROGRAM - The Research Awards Program which began in 1966 with an appropriation of $350,000 has continued to finance innovative fundamental research on a competitive basis. Proposals are solicited from the staff and reviewed by a panel of distinguished scholars drawn exclusively from a variety of universities and research organizations throughout the United States. No employeee of the Smithsonian serves on the review panel. Following the recommendation in the House-Senate Conference Report 95-1672 dated September 29, 1978, the

National Science Foundation has agreed to review the credentials of the panelists and certify their competence. Prior to FY 1978, approved Research Awards proposals were administered by the Smithsonian Research Foundation. Pursuant to the recommendation in the Government Accounting Office Report GGD-77-43 and the language in the FY 1978 Appropriation Bill, use of the Smithsonian Research Foundation was terminated in 1978. The program is now administered directly, under the newly created Office of Fellowships and Grants (p. A-117), following all appropriate Federal personnel and procurement practices and procedures.

The Research Awards Program is designed to provide the opportunity and the stimulus for Smithsonian staff to respond quickly to new research initiatives. Many of these initiatives reflect current national problems. Moreover, the program is a true zero-base one in that only the best developed and most significant projects are funded regardless of the organizational location of the individual researcher. It is the Smithsonian position that a program that encourages annual competition for relatively limited funds, as opposed to one that provides base allocations to individual bureaus, stimulates innovation and creativity.

The Research Awards Program is intended to provide resources for initial investigation of promising new ideas on a much shorter-term basis than the continuing research efforts that the Institution is committed to pursuing. Moreover, the program is intended only to fund projects through an initial investigation phase when the purchase of special research equipment and the hiring of temporary field and laboratory assistants must be done on very short notice. Promising longer-term projects are submitted for funding through the regular budgetary cycle.

It should be emphasized that the Research Awards Program never contributes any part of the salary of any Smithsonian staff member receiving the award. It does fund field and laboratory assistants, who are hired only for the duration of the funded project. Further, when an award is made, the recipient is not relieved from his other normal responsibilities to develop and maintain collections, create exhibits, and attend scientific meetings.

Examples of projects funded under this program include research into the shape and vein patterns of fossil leaves which has enabled the much more accurate mapping of sedimentary deposits in the western interior of the United States. This information is usable in the search for oil, coal and uranium in the area. Another project pertained to the detailed analysis of structure, chemistry, and mineralogy of numerous large meteorites. This work revealed the tremendous variety of processes which formed these bodies early in the evolution of planets. Also, under a Research Awards grant, the high-energy and optical and infrared divisions at the Smithsonian Astrophysical Observatory have developed a new detector for use in optical observations which will permit, by virtue of its significantly greater sensitivity and stability, observations of faint celestial objects heretofore unobserved, such as clusters of galaxies on the very edge of the known universe. This detector will be used at the Smithsonian Observatory at Mt. Hopkins, Arizona on its 60-inch and Multiple Mirror Telescopes for independent astronomical studies, as well as in support of the High-Energy Astronomy satellite (HEAO-B) launched by the National Aeronautics and Space Administration in November, 1978 and now in operation. These observations are anticipated to yield new information on the structure and evolution of the universe.

EXPLANATION OF PROGRAM CHANGE - The Smithsonian Institution continues to assign a high priority to the Research Awards Program, for it sustains the incentive for staff scientists to evolve the research initiatives that are crucial to the intellectual vitality, growth and integrity of the Institution. The program--which allows the opportunity for creativity on the part of staff researchers--is essential to enable the Institution to compete with universities or private firms for the most talented scientists. For FY 1980, an increase of $60,000 is requested. These additional funds will permit consideration of meritorious projects estimated to require more than the current ceiling of $20,000 placed on proposals, and will help to defray research support cost increases for supplies, equipment, services and travel. Because of these cost increases, the proposed new funds will not permit any

substantial growth in the number of awards to be made. However, the additional funds will allow the program to sustain the vitality and momentum essential for achievement of its overall objectives. It should be noted that this request includes a substantial amount, $105,000, for essential travel associated with the funded projects. The nature of the research conducted under this program necessitates travel to field sites throughout the world.

COLLECTIONS MANAGEMENT/INVENTORY PROGRAM

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	-	-	-	-	-	-	-	-	-	-
FY 1979 Base	-	500	-	-	-	-	-	-	-	-
FY 1980 Estimate	-	500	-	-	-	-	-	-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	0	0	0
Number of Other Positions.....	20	0	20
11 Personnel Compensation.....	267		267
12 Personnel Benefits.....	18		18
21 Travel & Trans. of Persons....	8		8
22 Transportation of Things.....	3		3
24 Printing and Reproduction.....	25	-10	15
25 Other Services.....	106	63	169
26 Supplies and Materials.....	19	-9	10
31 Equipment.....	54	-44	10
TOTAL	500	0	500

Analysis of Change

Necessary Pay.....	0
Program Funds.....	0

ABSTRACT - The Institution has initiated a new plan for the scheduling and conduct of inventories of its collections. Implementation of this plan is a high Institutional priority. In FY 1979, a special appropriation of $500,000 was made to the Institution to accelerate this process; these funds are being applied to major inventory projects in three museums where the need for this additional effort is of greatest urgency: the National Museum of Natural History and the National Museum of History and Technology, which are planning to remove some of their collections to the Museum Support Center by 1982, and the Cooper-Hewitt Museum, whose collections had not been fully inventoried prior to their transfer to the Smithsonian. To sustain the Institution-wide inventory program, the Institution requests an identical appropriation of $500,000 for FY 1980. These funds will be applied to special urgent inventory projects and will supplement those resources which museums are using for continuing inventory efforts within their normal operating budgets. Moreover, the funds will be used to develop inventory records that are

compatible with automated data processing systems in several museums where the size of the collections is relatively small.

PROGRAM - The Institution has established that a complete inventory of its collections is a major priority and an integral part of its collections management program. Although all museum bureaus have traditionally conducted inventories, each has established its own timetable, information requirements and procedures. Because of the underlying importance of the inventory process to a sound collections management system, and the need to obtain complete information data bases for such a system, the Institution adopted a new policy and plan, promulgated in September, 1978 and applicable to all Smithsonian museums, for achieving and maintaining inventory control of its collections. The plan requires an initial comprehensive inventory to be completed by June 1, 1983, a target date that takes into account the fact that there are more than 75 million objects and specimens in the collections.

The inventory plan further requires that regularly scheduled cyclical, comprehensive inventories be conducted in all museums under procedures appropriate to the characteristics of the objects, artifacts or specimens in the several collections. Written procedures describing the methodology to be used for inventorying the collections must be prepared in advance by the staff, approved by the museum director and the appropriate assistant secretary, and filed with the Smithsonian Institution's Registrar. The plan also provides for annual spot-check inventories, planned by the Office of Audits and conducted by an impartial team, of selected items in each museum. Statistical reports will be completed following each inventory and missing-item reports made immediately on any occasion that an item cannot be located.

In FY 1979, each of the three museums receiving support from the special inventory appropriation prepared a specific inventory plan and budget. Accelerated inventory activities require addition of part-time or temporary personnel who will be specially trained to work on task forces or teams assigned to specific collections. Data obtained from visual examination of collections, and cross-checking against catalogue records, will be recorded in a format readily convertible to an automated data processing system. This will permit correlation of inventory methodologies and data to the overall collections management process. And, most importantly, since the condition of objects will be noted as part of the data recorded, the Institution will be in a better position to quantify the conservation needs of it collections. Supplies, computer services and some equipment such as terminals for the direct entry of data into computers will be necessary for this intensive effort. A small portion of the appropriation will enable certain of the Institution's central support units, particularly the Office of Computer Services and the Office of the Registrar, to assist the three museums with their inventory procedures and computer requirements.

The Institution considers these accelerated inventory projects to be of great significance, since the procedures and technologies employed will help establish a firm pattern of inventory control for the future.

ADMINISTRATION

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	236	6,049	153	3,834	-	93	1	76	-	48
FY 1979 Base	242	7,191	160	4,957	-	56	1	70	-	-
FY 1980 Estimate	252	7,724	163	5,071	-	60	-	29	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	242	10	252
Number of Other Positions.....	11	0	11
11 Personnel Compensation.....	5,559	390	5,949
12 Personnel Benefits.....	861	44	905
21 Travel & Trans. of Persons....	47	5	52
22 Transportation of Things.....	1	1	2
23 Rent, Comm. & Utilities.....	188	20	208
24 Printing and Reproduction.....	115	6	121
25 Other Services.....	224	43	267
26 Supplies and Materials.....	134	13	147
31 Equipment.....	62	11	73
TOTAL	7,191	533	7,724

Analysis of Change

Necessary Pay.....	150
Program Funds.....	383

ABSTRACT - The Administration activity grouping includes the central management oversight and services provided by the Offices of the Secretary, Under Secretary, Assistant Secretary for Administration, General Counsel, Treasurer, and Coordinator of Public Information and the following specialized administrative and technical offices: Audits, Computer Services, Equal Opportunity, Facilities Planning and Engineering Services, Management Analysis, Personnel Administration, Programming and Budget, Supply Services, Contracts, Travel Services, and components of the Office of the Treasurer including the Accounting Office, Office of Grants and Risk Management, and Investment Division. As a group, these organizational units receive appropriated funds and non-appropriated unrestricted Trust funds for their operating support in approximate balance to the funding of the Institution. These organizational units serve all programs and activities of the Institution.

For FY 1980, a net increase of ten positions and $383,000 is requested. An additional 12 positions and $444,000 are sought for the personnel, facilities planning, computer services, and legal functions to enable them to meet greater and more complex workloads. This increase will also provide sufficient funds for the operations of several smaller administrative offices that have limited base resources. Offsetting the requested additional resources are recommended reductions of two positions and $61,000. Necessary pay in the amount of $150,000 is required for existing staff.

PROGRAM - Within this activity, the Office of the Secretary, with the assistance of the Office of the Under Secretary, is responsible for planning, implementing and reviewing the progress of all programs of the Institution. The Office of the Assistant Secretary for Administration, including the Director of Support Activities, is responsible for a broad range of administrative and technical services.

The Office of the General Counsel provides all legal services for the Smithsonian including those services associated with operating an Institution similar to a university or charitable corporation and those that are common to governmental organizations.

The Office of the Treasurer has the overall responsibility for the financial management of the Institution. This includes the direction of financial planning, accounting and financial reporting, administration of grants and insurance, management of certain auxiliary activities such as the museum shops, handling of bank relations, and oversight of investments.

The Office of the Coordinator of Public Information is composed of the Offices of Public Affairs, Congressional Liaison and Special Events. These offices are responsible for providing information about the Smithsonian and its programs to the general public and the Congress, for overseeing legislation pertaining to or of general interest to the Institution, and for arranging special events associated with exhibit openings, lectures and other presentations.

The Office of Audits, which reports to the Under Secretary, is responsible for performing all internal and external auditing functions of the Institution. The internal function includes responsibility for auditing Federal operating units' programs and staff offices as well as all non-appropriated Trust funded activities of the Institution. The external audit function involves the audit of documentation in support of claims, cost proposals, and cost and pricing data arising from contracts, grants and other financial agreements funded by the Smithsonian. These audits are performed upon request of the contracting officer and as required by law.

The Office of Computer Services is responsible for developing automated administrative, collections management, and research support systems. The office works with curators, historians, scientists, and management personnel in helping them to apply computer techniques to the storage, assembly, analysis and reporting of data required for museum and laboratory operations and for a wide range of administrative and business needs.

The Office of Equal Opportunity plans, conducts and monitors a positive action program to provide equality in all Smithsonian employment practices and program activities. Major efforts include counseling, upward mobility, a women's program, a cooperative education program, a sixteen point program for the Spanish-speaking and a program for disabled persons, all aimed at ensuring equality of opportunity through affirmative action.

The Office of Facilities Planning and Engineering Services provides professional architectural and engineering services for the buildings and facilities management functions. Its responsibilities include short and long-range planning, engineering analysis, design, cost and budgetary estimates, contract supervision and general construction administration.

The Management Analysis Office performs general management staff assistance and advisory services related to administrative operations. The office makes studies of systems and procedures, prepares and distributes announcements and instructions covering general policies and procedures and operates a forms management program.

The Office of Personnel Administration is responsible for recruitment, placement, position classification, employee training and development, labor management relations, workers' compensation, personnel policy management evaluation and program development.

The Office of Programming and Budget formulates the consolidated Federal and non-appropriated funds' budgets for review and approval by the Secretary and Board of Regents. Approved budgets are developed for submission to the Office of Management and Budget and the Congress. Appropriated and non-appropriated budgets are administered and monitored to help assure that program needs are met and that the Institution's accountability is maintained.

The Office of Supply Services procures supplies, materials, contractual services, and equipment for research, curatorial, exhibits preparation, and other Smithsonian activities. The office also maintains all property records and schedules, and oversees periodic inventories to ensure proper accountability and security. The separate Contracts Office assists in obtaining Federal grants and contracts for work which the Institution is qualified to perform and negotiates certain specialized procurement contracts.

The Travel Services Office plans itineraries and makes arrangements for travel in support of the research, curation, and administration of the Institution so that these functions can be accomplished in the most efficient and economical manner possible.

EXPLANATION OF PROGRAM CHANGE - In FY 1980, an additional 12 positions and $444,000 are sought for the personnel, facilities planning, computer services and legal functions to enable them to meet greater and more complex workloads, and for providing sufficient funds for the functioning of several smaller administrative offices that have limited base resources.

For the Office of Personnel Administration, four additional positions and $110,000 are requested. The Civil Service Reform Act of 1978 and the Panama Canal Treaty will create a substantial amount of additional personnel work. For example, the merit pay provision (Title IV of the Civil Service Act) and particularly the development of a performance appraisal system will require that all Smithsonian position descriptions be reviewed and, as necessary, revised to establish critical job elements and performance standards. Several appraisal systems may be needed to meet the needs of specialized groups of employees. Similarly, the implementation of a new personnel system at the Smithsonian Tropical Research Institute (as a result of the elimination by the Panama Canal Treaty of the Canal Zone Merit System) will require major attention by this office. In addition, the Personnel Office is seeking to improve the quality of its day-to-day services and its responsiveness to bureau and office needs. The authorized staff of the office currently totals 50 employees (37 Federal and 13 Trust) and the ratio of personnel staff to people served is 1:103 which is far above the governmental average of 1:65. The requested four additional Federal employees and the projected additional Trust employee will enable the office to lower the ratio, to improve the quality of its services, and to cope with the additional responsibilities assigned by new legislation.

Facilities planning continues to be a major focus of management attention. The Office of Facilities Planning and Engineering Services (OFPES) provides various planning, engineering, architectural and related administrative services to the Institution and its physical plant, comprised of 3.0 million net usable square feet on an excess of 10,000 acres of land located in Washington, Maryland, Virginia, Arizona, New York and Panama. During FY 1978, OFPES

developed and administered over 300 construction and construction-related projects, and reviewed over 250 exhibit designs to insure proper engineering and architectural considerations. In addition to the staff needed to alleviate a current backlog of engineering design work estimated at six staff-years, a major and critical requirement for OFPES is the development of a planning staff. Such a staff is needed to produce long-range repair, replacement, and construction plans and budgetary requirements for each Smithsonian facility as well as comprehensive plans for the entire Institution in the areas of fire detection and prevention; heating, ventilating, and air conditioning systems; access for the disabled; and facade and roof repairs. Currently OFPES has an authorized staff of 38 employees (31 Federal and seven Trust). An additional four positions and $147,000 are requested to create the planning capability which will provide management with a broader comprehension of future needs, provide for some increased use of outside consultants and cover additional support costs of the office.

For the Office of Computer Services (OCS), an additional three positions and $121,000 are sought. This request includes two positions and $42,000 to provide additional computer support for program improvement in several administrative support areas. Computer assistance will be given to the Libraries for acquisition processing and improvement of cataloguing techniques; to the Office of Protection Services to assist in implementing new security controls and techniques; to the Office of Facilities Planning to develop project management and control systems; and to the Office of Plant Services to develop a materials inventory. One position and $38,000 are needed for collections management inventory purposes, with the position and $20,000 to be used to assist in developing photographic file inventories and retrieval systems associated with the Institution's collections, and $18,000 to rent additional data entry terminals, disc memory storage, and communications equipment which will expand capabilities for entering collections inventory data into the computer. The remaining portion of the request, $41,000, will be used for advanced staff training in the area of computer communications, graphics, and data base management systems so that staff will be more efficient and productive in applying these technologies to Institutional applications ($12,000), and for costs associated with maintaining a career ladder for trainees ($29,000).

There also has been a greatly increased demand for the services of the Office of General Counsel (OGC), particularly in the areas of employee relations, contract disputes and tort claims. Legal review to ensure that Smithsonian policies conform to recently enacted legislation, such as the Civil Service Reform Act and the Age Discrimination in Employment Act, will also create additional work. To assist OGC in meeting the demand for its services in these matters, one secretarial position and $15,000 are requested. An additional $5,000 is sought to purchase reference books for the law library and to update office equipment.

Finally, an amount of $46,000 is requested to provide adequate funds for the Offices of Supply Services, Management Analysis, Public Affairs and Congressional Liaison. The limited base funding available to these offices has not been adequate to absorb the higher cost of supplies or to compensate for the larger proportion of funds that must be devoted to pay the salaries of on-board staff. The additional funds being requested will be used to defray these increased costs.

Offsetting the requested additional resources are recommended reductions of two positions and $61,000. The positions are associated with the Offices of the Assistant Secretary for Administration and Travel Services. Revised work assignments to other staff in these two offices have eliminated the current need for these positions. Further savings can be achieved in some offices by filling higher-graded vacancies at lower grade levels.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--The unrestricted Trust funds derive from overhead recovery on grants and contracts administered by the Smithsonian and from administra-

tive fees charged to Trust funded activities. Funding of these centralized services from both the Federal and non-appropriated sources produces a ratio of Federal and Trust fund administrative support approximately in proportion to the operating program expenditures of the Institution as a whole. (The dollar amount shown under unrestricted general represents gross expenditures before the application of overhead recovery of $3,359,000 in FY 1978, $4,155,000 in FY 1979, and $4,458,000 in FY 1980.)

Special purpose Trust funds include fluid research awards made for seminars and related research, expenses of the annual Christmas Dance hosted by the Women's Committee whose net proceeds are distributed to individual bureaus, and a centralized revolving fund to recover computer paper costs from users. The proceeds from this activity are used for paper purchases.

Restricted Funds--Included in this category are Endowment bequests for ornithological research, foundation grants for the International Council on Bird Preservation administered by the Institution, annuity payments to a former Under Secretary of the Institution, and funds to cover seminars and meetings for scholarly activities at the Institution.

Federal Grants and Contracts--In past years costs were incurred by the Office of Computer Services for outside users of the Institution's computer system. No outside use is anticipated for FY 1980.

PRINTING, PHOTOGRAPHIC, AND BUILDING SERVICES
(SUPPORT)

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	907	25,703	21	658	2	127	2	32	-	-
FY 1979 Base	910	26,329	24	1,087	2	62	-	-	-	-
FY 1980 Estimate	911	27,952	24	1,192	2	98	-	-	-	-

*FTP = Full-time permanent positions

Analysis of Change (Federal Request)

Necessary Pay.....	363
Other Uncontrollable.	800
Program Funds.....	460

The FY 1979 base for the three support units in this Activity totals 910 positions and $26,329,000. A program increase of $460,000 and a net increase of one position are sought for FY 1980. An additional amount of $800,000 is requested to fund the projected higher cost of utilities in FY 1980. (The justification for the proposed utilities increase appears in the Uncontrollable Section.) An amount of $363,000 is required for necessary pay.

The additional funds will be applied to the Institutional priority program needs of collections management, facilities improvements and protection. An amount of $65,000 is required for the Office of Printing and Photographic Services: to hire two additional photographers who will assist the curators in the photographic documentation of the collections; to convert volatile nitrate-based film into a safer, more stable film; and to purchase related supplies. Funds of $145,000 are sought for the Office of Protection Services for additional part-time gallery guards and for part-time personnel for cloak rooms in order to release the full-time gallery guards, who currently staff the cloak rooms, for gallery protection purposes. The Office of Plant Services (OPLANTS) is seeking an increase in funding of $250,000 in order to enable it to carry out routine maintenance and exhibits support functions without interruptions in service. Additionally, a reduction of one position is recommended for OPLANTS, with the associated funds to be applied toward the need for increased funding for supplies.

Following a decision by the Board of Regents to finance certain programs of the Institution previously funded with Federal appropriations, an amount of $394,000 is being deducted from OPLANTS' Federal base in FY 1979. These funds will be replaced with non-appropriated unrestricted Trust funds (provided through the budgets of various auxiliary activities located on the Mall and administrative units located at L'Enfant Plaza) to pay for an appropriate share of the rented space at L'Enfant Plaza and at the Service Center at 1111 North Capitol Street.

The sources and uses of non-appropriated Trust funds are explained individually for each line-item in this Activity.

OFFICE OF PRINTING AND PHOTOGRAPHIC SERVICES

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	39	998	16	414	-	-	2	32	-	-
FY 1979 Base	39	985	19	604	-	-	-	-	-	-
FY 1980 Estimate	41	1,066	19	700	-	-	-	-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	39	2	41
Number of Other Positions.....	1	2	3
11 Personnel Compensation.....	687	61	748
12 Personnel Benefits.....	67	6	73
21 Travel & Trans. of Persons....	2		2
22 Transportation of Things.....	1		1
23 Rent, Comm. & Utilities.....	5		5
24 Printing and Reproduction.....	5		5
25 Other Services.....	48		48
26 Supplies and Materials.....	120	7	127
31 Equipment.....	50	7	57
TOTAL	985	81	1,066

Analysis of Change

Necessary Pay.....	16
Program Funds.....	65

ABSTRACT - The Office of Printing and Photographic Services (OPPS) is the Institution's central office for technical advice, guidance and production of all matters concerning photographic, duplicating and printing services. The office coordinates photographic and printing activities, and supplies technical support to the curatorial, scientific, technical and administrative staff. It also provides photographs, slides and transparencies with cassette lectures to the general public, schools, research foundations, education publications, other museums and government agencies. An increase of two positions and $65,000 is requested for FY 1980 to provide increased collections management support. Necessary pay in the amount of $16,000 is required for existing staff.

PROGRAM - OPPS provides photographic, printing and other reproduction services in support of research, collections management, exhibits, publications and public education. Photographic services include studio and on-site photography, photographic copy restoration

and printing, filing and retrieval of negatives, preparation of responses to public inquiries and filling orders. In FY 1978 the office added the production of oversized black and white mural photographs to its services. In FY 1978 almost 500,000 color slides and transparencies and over 200,000 black and white prints were produced.

Printing and reproduction services include the production of certain exhibit catalogues, educational pamphlets and informational leaflets. In addition, OPPS prints and reproduces a variety of manuals, reports, specimen labels and administrative directives. These services are accomplished through the use of multilith and electrostatic copier equipment. In FY 1979 the office added phototypesetting to its capabilities.

EXPLANATION OF PROGRAM CHANGE - For FY 1980, an increase of two positions and $65,000 is requested to enable OPPS to provide further support to the Institution's collections management efforts. A laboratory photographer position ($14,000) is sought to process prints from large collections of existing negatives (including the conversion of hazardous nitrate film into copy negatives on archival quality safety film) where such prints are needed to meet curatorial research and archival requirements. An additional photographer position ($14,000) is requested for the systematic documentation of Smithsonian collections which have never been fully photographed, such as coins, gems and minerals. An additional $14,000 is required for necessary supplies and equipment to support the increased work generated by the collections management effort.

An amount of $23,000 is requested for two part-time positions in the duplicating services division. One of these will be used for the operation of phototypesetting equipment, thereby freeing up full-time personnel who currently operate the equipment for the collections management-related services of printing and duplicating. The other will be used to put into effect the recommendation of a report by the Smithsonian Office of Audits that this office assume the routine mailing work for Public Affairs news releases. This part-time position also will be used in the bindery section to serve collections management requirements.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purposes Funds--The major portion of these funds covers the cost of producing, distributing and marketing photographic materials and and slide sets (14 positions, and an estimated $535,000 in FY 1979; $626,000 in FY 1980). The sale of these materials is expected to cover in part their production cost. The remaining 5 positions and $69,000 in FY 1979 ($74,000 in FY 1980) are provided by an allotment to help defray costs of the duplicating branch in recognition that the duplicating branch provides services to programs and offices which are funded from gifts, grants, contracts and other sources of funds.

OFFICE OF PROTECTION SERVICES

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	546	8,677	-	-	-	5	-	-	-	-
FY 1979 Base	549	9,339	-	-	-	(19)	-	-	-	-
FY 1980 Estimate	549	9,695	-	-	-	13	-	-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions...	549	0	549
Number of Other Positions.....	35	30	65
11 Personnel Compensation.....	7,790	336	8,126
12 Personnel Benefits.....	738	20	758
21 Travel & Trans. of Persons...	15		15
23 Rent, Comm. & Utilities.....	6		6
24 Printing and Reproduction....	3		3
25 Other Services.....	377		377
26 Supplies and Materials.....	304		304
31 Equipment.....	100		100
42 Insur. Claims & Indem.....	6		6
TOTAL	9,339	356	9,695

Analysis of Change

Necessary Pay.....	211
Program Funds.....	145

ABSTRACT - The Office of Protection Services (OPS) is responsible for the security, fire protection, safety and health programs of the Smithsonian. In FY 1980 an increase of $145,000 is requested to hire temporary guards to provide more adequate security for new exhibitions ($75,000) and to hire part-time cloakroom attendants ($70,000) so that trained gallery guards who presently perform this function can be reassigned to security work in exhibition halls. Necessary pay in the amount of $211,000 is required for existing staff.

PROGRAM - The Office of Protection Services provides security, fire protection, safety and health services to visitors (over 25,000,000 in FY 1978) and employees (some 5,000) of the Institution. The responsibilities of OPS are carried out pursuant to P.L. 82-206 and 88-391 relating to the policing of the buildings and grounds of the Smithsonian Institution and its constituent bureaus, and P.L. 91-596 and Executive Order 11807 which deal with occupational health and safety. OPS responsibilities will extend to 11 major museums

and art galleries and various other Smithsonian facilities in the Metropolitan Washington, D.C. area as well as the Cooper-Hewitt Museum in New York City. Occupational health and safety programs have also been administered at the National Zoological Park, the Smithsonian Tropical Research Institute, the Chesapeake Bay Center for Environmental Studies and the Smithsonian Astrophysical Observatory. Inspections, technical assistance and other advisory services are also provided to these Smithsonian activities.

The mission of OPS is carried out by staff including guards who protect the facilities, staff and visitors and enforce laws on Smithsonian property; safety specialists who administer occupational safety and health programs and conduct inspections throughout the Smithsonian; fire engineers and inspectors who help plan the fire prevention program and inspect the buildings and facilities; medical personnel who administer health programs for staff and visitors; alarm system specialists who work with and help plan and install electronic and other physical security systems; and administrative support personnel who are involved in managing personnel, budget, training, supply and clerical functions.

The primary function of OPS is to provide security to exhibits, reference collections and the visiting public. To accomplish this task, security officers are placed in the galleries, around the grounds, and at entrances and exits during the day and conduct security and fire patrols after the museum buildings are closed to the public. Security officers are responsible for areas designated as "posts." A post may be one point (for example, a museum entrance), or an area, varying in size and determined by the use of the area; crowd conditions; the value of objects on display; the vulnerability of those objects to accidental damage, vandalism or theft; the effective field of vision of the assigned protection personnel; and the ability to use electronic devices. The number of guards required to staff one post may vary from one (a post staffed eight hours a day, five days a week) to five (a post staffed 24 hours a day, seven days a week). The security force operates 24 hours a day, seven days a week. An extensive radio and telephone communications network enables security officers to respond quickly to all situations. Over 225 alarms are received daily, all of which demand immediate response. The security force also investigates accidents, reports possible fire and safety hazards and malfunctions in mechanical and environmental equipment, and provides information to museum visitors.

Fire and safety programs include quarterly fire inspections of each facility and annual safety and industrial hygiene inspections. These OPS inspections have resulted in long range plans for installation of required new and upgraded fire systems for compliance with safety regulations. The health service operates four health units for the convenience, assistance and emergency calls of staff and visitors. During FY 1978 the health unit provided some 33,682 treatments (an average of 92 a day).

The development of the proprietary alarm system is proceeding according to schedule; it is expected to be completed by 1983. Preliminary preparation of each of the buildings for connection to the control system center will be accomplished in FY 1979. Initial monitoring equipment should be installed in each of the security offices later that year.

The number of misdemeanors and felonious incidents committed in calendar year 1978 totalled 309, a decrease from FY 1977. Special efforts are made to curtail crime through the use of canine teams after hours and the deployment of plainclothes officers.

EXPLANATION OF PROGRAM CHANGE - As new exhibition halls and galleries open, additional security guards are needed for the protection of valuable objects and visitors. For FY 1980, a total of $145,000 is requested to enable OPS to provide essential guard coverage.

An amount of $75,000 is sought to hire temporary guards (eight staff-years) to be stationed in exhibition halls in the National Museum of Natural History and National Museum of History and Technology. In Natural History, the security force would be strengthened in the Physical Anthropology, Dinosaurs, and Origins of Mid-Eastern and Western Civilization Halls. In some areas of the Museum of History and Technology, areas that properly should be covered by two guards have been covered by a single individual. The addition of these temporary guard positions would alleviate this problem. The coverage could be rotated among "Nation of Nations," "Person to Person" and "We the People" as well as other exhibition halls.

A further $70,000 is sought to enable the use of part-time employees to staff the cloakrooms of the Mall museums in lieu of the seven trained gallery guards who presently perform this function, thus enabling them to return to more pressing security duties.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds, provided on a reimbursable basis for use of guard services at special events and lectures at Smithsonian facilities, are used for the salaries of part-time security aides and the purchase of supplies and equipment.

OFFICE OF PLANT SERVICES

(Dollars in thousands)

Fiscal Year	FEDERAL FUNDS		NON-APPROPRIATED SOURCES OF FUNDING							
			UNRESTRICTED				RESTRICTED		FEDERAL GRANTS & CONTRACTS	
			General		Special Purpose					
	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount	FTP*	Amount
FY 1978 Actual	322	16,028	5	244	2	122	-	-	-	-
FY 1979 Base	322	16,005	5	483	2	81	-	-	-	-
FY 1980 Estimate	321	17,191	5	492	2	85	-	-	-	-

*FTP = Full-time permanent positions

Detail of Federal Funding

	Base FY 1979	Proposed Adjustments	Est. FY 1980
Number of Permanent Positions....	322	-1	321
Number of Other Positions.....	10	0	10
11 Personnel Compensation.....	5,943	101	6,044
12 Personnel Benefits.....	582	10	592
21 Travel & Trans. of Persons....	5	2	7
23 Rent, Comm. & Utilities.....	8,572	800	9,372
24 Printing and Reproduction.....	6		6
25 Other Services.....	553		553
26 Supplies and Materials.....	227	275	502
31 Equipment.....	117	-2	115
TOTAL	16,005	1,186	17,191

Analysis of Change

Necessary Pay.....	136
Other Uncontrollable.....	800
Program Funds.....	250

ABSTRACT - The Office of Plant Services (OPLANTS) operates, maintains and repairs 10 museums and art gallery buildings and a number of other work and collection storage areas located in the Washington Metropolitan area. It provides utilities, transportation, mail and telephone services in support of research, exhibit, education and other public programs. In addition, technical advice and assistance are made available to other Smithsonian units located away from the Washington, D.C. area. For FY 1980, a proposed increase of $250,000 is sought for essential supplies for normal operations. In addition, this office proposes a decrease of one position with related salary funds also being directed toward essential supply needs. As a result of the decision by the Board of Regents to finance with non-appropriated Trust funds certain programs previously financed with Federal appropriations, a permanent base reduction of $394,000 in OPLANTS' rental account was effected in FY 1979. Necessary pay in the amount of $136,000 is required for existing staff. An additional $800,000 for utilities, postage, telephone, and fuel oil costs is being requested in the Uncontrollable Section.

PROGRAM - OPLANTS operates, maintains and repairs the Smithsonian's physical plant on or near the Mall, including approximately 2.6 million net usable square feet in 10 museums and art galleries. Services also are provided to other work and storage areas including space in leased facilities. Operational responsibilities for utilities funding and management include the maintenance of large and complex air conditioning, heating and ventilating systems and electric or electronic environmental controls and systems for the comfort of visitors and for the protection of buildings, natural history specimens, paintings, sculptures, and objects of American history and technology.

Trade and craft assistance, such as carpentry, painting and electrical work, is provided to hundreds of research projects, exhibition installations and special public events every year. Packing, crating, warehousing and moving services are carried out for museum objects and collections. OPLANTS also has responsibility for communications systems including the management and funding of telephone installations and services (Federal Telecommunications System and local calls), and the processing of and payment for mail. Transportation services, including maintenance, repair and operation of vehicles, are also carried out by the office.

The computerized power management system, installed in the History and Technology Building in 1975 and extended into the Arts and Industries, Smithsonian Institution and Natural History Buildings in FY 1977, was completed in FY 1978 with its installation in the National Air and Space Museum. This system will assure through the use of remote sensors that prescribed levels of power consumption are not exceeded.

Also in FY 1979 the installation of a computerized instruction and reporting system for identifying preventive maintenance requirements for all fire prevention, automatic lighting, guard station, heating, ventilating and air conditioning mechanical equipment in all major Smithsonian buildings was completed. This system covers equipment located in the History and Technology, Smithsonian Institution, Arts and Industries, Natural History, and Air and Space Museum Buildings and the Silver Hill Facility, Anacostia Neighborhood Museum and the Smithsonian Service Center. It is designed to assure efficient maintenance of the Institution's security equipment and heating, ventilating and air conditioning systems, thereby contributing to the safety of the Smithsonian's collections and buildings.

In addition, the installation by OPLANTS of a computerized system to monitor and analyze the various mechanical equipment in buildings located on the Mall, the Renwick Gallery, and the Fine Arts and Portrait Galleries Building is anticipated to be completed by December, 1979. The system, which involves the installation of sensors on over 3,900 pieces of equipment, automatically will alert a central computerized control center to equipment malfunctions. As a result of the system, by the end of FY 1979, some 25-30 engineers will begin to be redirected from continual inspection tours to critical operations, preventive maintenance and repair tasks related to the heating, ventilating and air conditioning (HVAC) systems. This redirection of 25 to 30 employees will reduce significantly the current shortage of mechanics needed to perform necessary preventive maintenance tasks on the HVAC systems.

Also during FY 1978, OPLANTS conducted Institution-wide programs to hold down costs in the areas of telephone installation and preventive maintenance for vehicles, and continued to improve its total moving and rigging capability to serve the varied needs of the Institution.

EXPLANATION OF PROGRAM CHANGE - An amount of $250,000 is requested to purchase essential supplies and materials used extensively by OPLANTS in maintaining the Smithsonian buildings and their mechanical systems and providing essential support to Smithsonian exhibits programs. Since FY 1976, the average annual cost of these supplies and materials has risen by approximately 10 percent, and all indications point to the continuation of this rate of increase in FY 1979 and FY 1980. For example, the cost of

a three-quarter-inch thick sheet of four foot by eight foot plywood has risen from $14.95 per sheet in FY 1976 to $18.95 per sheet in FY 1978; the cost of white latex paint has risen from $3.05 per gallon in FY 1976 to $5.15 per gallon in FY 1978. These items are used extensively in exhibits fabrication. OPLANTS has been able to maintain normal operations during the past two years by consolidating supplies from several storage locations throughout Smithsonian buildings into one centralized warehouse at the Smithsonian Service Center. By FY 1980 this stockpile will be depleted. The additional funds requested will be used to offset price increases of the various supplies thus enabling OPLANTS to carry out its routine maintenance and exhibits support functions without interruption. In addition, the funding associated with an administrative position that is proposed for reduction will be applied toward this need.

Following a decision by the Board of Regents, a permanent base reduction of $394,000 was effected in FY 1979. The appropriated funds will be replaced with non-appropriated, unrestricted trust funds (provided through the budgets of various auxiliary activities located principally in Mall buildings and from the overhead budget of the administrative activities located at L'Enfant Plaza) to pay for an appropriate share of the rented space at L'Enfant Plaza and at the Service Center at 1111 North Capitol Street.

NON-APPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds--These funds are provided by an allotment to cover the cost of five employees (approximately $76,000 in FY 1979 and $80,000 in FY 1980). An allotment from the overhead budget provides for the payment of the Trust funds share (approximately 40%) of rental costs for administrative units in L'Enfant Plaza. Special purpose funds represent expenses of the audiovisual unit operated by OPLANTS. The cost of operating the unit (an estimated $81,000 in FY 1979 and $85,000 in FY 1980) is anticipated to be met from reimbursements from users.

TAB B

MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

SMITHSONIAN INSTITUTION
MUSEUM PROGRAMS AND RELATED RESEARCH
(SPECIAL FOREIGN CURRENCY PROGRAM)

1978 Appropriation	$4,000,000	Equivalent in Excess Foreign Currencies
1979 Appropriation	$3,700,000	
1980 Estimate	$7,700,000	

An appropriation of $7,700,000, equivalent in foreign currencies, which have been determined by the Treasury Department to be in excess of the normal needs of the United States, is requested for FY 1980. The appropriation will be used:

-- to continue a program of grants to United States institutions for field research in the program areas listed below in those countries where excess local currencies are available. Of the total $3,700,000 requested for research, $2,800,000 will be available for one-year funding of continuing projects, $400,000 will support new projects, and $500,000 will provide multi-year funding of projects for which assurance of funding continuity is important; and

-- for a United States contribution to the international effort organized through UNESCO to restore and preserve the 4,500-year old Indus civilization city of Moenjodaro in Pakistan. An appropriation of $4,000,000 equivalent in Pakistani rupees is requested in FY 1980.

Obligations of Funds by Program Area
(dollar equivalents)

	FY 1978 Actual	FY 1979 Estimate	FY 1980 Estimate
Archeology and Related Disciplines	$3,551,000/1	$2,572,000	$6,406,000 /2
Systematic and Environmental Biology	305,000	616,000	504,000
Astrophysics and Earth Sciences	119,000	258,000	495,000
Museum Programs	69,000	134,000	211,000
Grant Administration/3	65,000	20,000	17,000
NSF -- Science Information Program (Translations)	202,000	200,000	167,000
Total	$4,311,000	$3,800,000	$7,800,000

/1 FY 1978 amount includes the last of four annual payments each of $1,000,000 equivalent in excess Egyptian pounds, which together constitute the United States contribution to the project to save the Temples of Philae.

/2 Includes $4,000,000 equivalent for a U.S. contribution to the international effort to preserve Moenjodaro.

/3 Includes transfers to the State Department for "Shared Administration Expenses."

PROGRAM OF GRANTS FOR FIELD RESEARCH

The purpose of the Smithsonian Foreign Currency Program is, like that of the Institution itself, "the increase and diffusion of knowledge." The Smithsonian Foreign Currency Program supports this purpose by making grants to United States universities, museums, and other institutions of higher learning, including the Smithsonian itself, primarily for research and advanced professional training in fields of traditional Smithsonian competence. An appropriation of $3,700,000 equivalent in excess foreign currencies is sought for these grants.

The Smithsonian program is the principal source of excess foreign currency support for research carried out by United States institutions in the excess currency countries. The Smithsonian program is distinguished from other Special Foreign Currency Programs in that the full responsibility for the design, execution and publication of research results rests with a scholar working within the program of a United States institution. The importance of this source of funds grows as inflation diminishes funds available from other sources for such research.

The Smithsonian program strengthens the research and training activities of collaborating institutions abroad as well, for most projects directly involve host country institutions and scholars. Enduring professional ties which result from such joint efforts and scholarly exchange contribute to the strongest form of United States cultural relations with other nations. Moreover, these ties contribute to the integration of the worldwide scientific process which serves to narrow the gap between the industrial and the developing nations.

The Importance of Research in the Natural Sciences and Cultural History

Research in the natural sciences and in cultural history is important to understanding and managing a world where human population growth exceeds the availability of resources to support that population.

Grants awarded by the Smithsonian in systematic and evolutionary biology have contributed to the understanding of the individual and the surrounding environment. In FY 1978, grants supported the following projects of special interest:

-- the quarrying of fossil sites in the Fayum Province of Egypt which is providing information on the early primate ancestors of man 35 million years ago; and

-- the collaboration of teams of paleobiologists from Howard and Yale Universities, the Smithsonian and University of Michigan with the Geological Survey of Pakistan which is contributing to the knowledge of the mineral resources of that country.

In astrophysics and earth sciences, contributions were made to the study of the earth and its management. For example:

-- specialists in solar energy met in India to exchange ideas and technological expertise. Scientists of developed countries contributed news of technological advances while developing nations demonstrated their traditional and practical uses of solar energy; and

-- studies are being made of sand movement and desert erosion through field observation and satellite photos. This contributes to efforts towards dune stabilization and control of desertification.

Smithsonian grants in cultural history contribute to an understanding of the individual and society. In FY 1978, grants supported a comprehensive study of 19th and early 20th century photographs taken in India by both British and Indian professional photographers which is providing new interpretive material on social attitudes of the period.

The special role of museum programs in acquainting one people with the culture of another continued to be demonstrated in FY 1978 with Smithsonian support for exchange programs including:

-- a survey of cross-cultural folk traditions using puppetry which was begun among diverse cultures of Burma, Guinea, Egypt, India and Pakistan; and

-- a continuing exchange of U.S. and Indian museum professionals which provides new insights into exhibition development.

The Importance of Multi-Year Grants

Since the inception of its Special Foreign Currency Program the Smithsonian practice has been to provide funding on an annual basis for most of its grantees even though approved proposals are frequently of a multi-year nature. This has been done because until FY 1979 the Smithsonian appropriation was sufficient to allow for only occasional multi-year grants. It is worth noting that multi-year funding is the standard practice of other Special Foreign Currency Program agencies.

In FY 1979, with an appropriation of $3,700,000 equivalent in foreign currencies, and in FY 1980, with the same amount requested, multi-year funding of major programs on a regular basis will be possible. Multi-year funding is important for several reasons. Rational planning by the United States grantee institution and by the host country collaborator requires the advance commitment of professors and graduate students as well as of facilities. The broad objectives of the participating institutions also depend on the coordination of such resources. Multi-year grants, with annual disbursement subject to a finding by the Smithsonian that satisfactory progress has been made, are essential to provide reasonable assurance of funding to these institutions. Further, the Smithsonian has found it necessary to undertake multi-year funding on those occasions when it was essential to protect investments in successful projects against the possibility that some excess currency accounts would be exhausted. This happened in Poland and Tunisia in FY 1977, and is expected to happen in Egypt no later than FY 1981.

Benefits to United States Institutions

Since the inception of the program in FY 1966, Smithsonian grants have been made to 191 United States institutions in 31 states and the District of Columbia to support more than 500 individual projects. Publications known to have resulted from program grants totalled more than 1,100 at the end of FY 1978.

More than 100 research collections have been returned to United States universities and museums. A similar number of collections have been added to the research resources of the excess currency countries. These collections are the original biological specimens and the archeological and ethnographic materials acquired in the course of field research. They will remain available for further study and interpretation by other generations of scholars long after the research teams supported by the Smithsonian have dispersed and their conclusions been published.

The benefits of the program have extended to a far larger number of institutions than the 191 direct grant recipients mentioned above. For example, three of the grantee institutions are consortia of United States scholarly institutions. They are the American Institute of Indian Studies (AIIS) in Chicago, Illinois, with 29 institutional members; the American Research Center in Egypt (ARCE) in Princeton, New Jersey, with 22 institutional and some 600 individual members; and the American Schools of Oriental Research (ASOR) in Cambridge, Massachusetts, with 135 member institutions including three scholarly associations.

Smithsonian grants have supported the research in India of 239 AIIS fellows over the 11-year period from FY 1968 through FY 1978. The fellows were drawn from 43 United States institutions in 22 states. Program grants have also supported 43 ARCE projects over the

13-year period from FY 1966 through FY 1978. Nine ASOR excavations in Israel and Tunisia have provided research opportunities for more than 260 senior U.S. scholars and field training for more than 324 graduate students.

Scientific Review Under the Smithsonian Program

The Smithsonian's Special Foreign Currency Program provides a mechanism for American private sector institutions--universities, museums and research centers--to make use of excess foreign currencies in support of their own research programs.

The Smithsonian program considers proposals from any qualified American institution for research in fields of traditional Smithsonian competence. The program seeks the advice of experts in the specific area of sciences to be studied in reviewing the proposals and annually convenes advisory councils of senior scholars from across the nation. Following the recommendation in the House-Senate Conference Report 95-1672 dated September 29, 1978, the National Science Foundation has agreed to review the credentials of the members of the advisory councils and certify their competence. The councils discuss and evaluate the proposals, taking into consideration the experts' opinions, and provide specific advice to the Smithsonian regarding the priority among and selection of proposals recommended for support.

Foreign currency awards to other institutions are executed as normal Federal contracts, with the American grantee institutions providing for full fiscal accountability. The Smithsonian audits each grantee's periodic financial reports and where grantees maintain records abroad, conducts site audits to ensure that appropriate accounting procedures are followed.

Whether funded originally on a multi-year or one-year basis, projects lasting more than one year are subject to an annual review of scientific progress by the advisory councils before another year of funding is approved. In addition, Smithsonian staff scientists and program advisory council members visit projects in the field when firsthand scientific reports are considered necessary. Smithsonian policy requires that grantees publish scientific results and that scientific collections be readily accessible to the scholarly community.

The Importance to the Smithsonian of Awards for Research

Access to funds for independent research is an essential factor in enabling the Smithsonian to attract and retain leading researchers and thereby to maintain a standard of excellence as a research institution. In this context, the Institution's initial request in FY 1966 for an appropriation of excess foreign currencies (initiated at the recommendation of the Department of State because of the recognized competence of the Institution in archeology) made it clear that Smithsonian scholars would compete for these funds. The appropriation justification in that year stated that the Institution would "...award and administer foreign currency grants...for maximum benefit of all participating institutions, as well as the Smithsonian." This appropriation has provided Smithsonian scientists an opportunity to pursue new and innovative research.

Under the Special Foreign Currency Program guidelines, Smithsonian proposals are reviewed by the same councils of distinguished scholars as are proposals from other institutions. Continuing projects are also subject to annual reviews. (These processes are described above in the section entitled "Scientific Review Under the Smithsonian Program.") The Special Foreign Currency Program awards to Smithsonian employees, as to other scholars, often involve participants from other organizations and universities as collaborators. No Smithsonian employee, nor any other grantee, receives personal compensation to duplicate or supplement his salary. Program awards cover only field research costs in the excess currency country and international travel to the country.

The awards to Smithsonian employees are executed as normal Federal allotments to the individual bureaus of the Institution for the support of approved employee research projects. Such funds are expended in accordance with Federal procurement and personnel regulations.

INTERNATIONAL EFFORT TO SAVE MOENJODARO

In 1921, two important and wholly unexpected discoveries were made in the Indus Valley of India, now Pakistan, when archeologists discovered the remains of the cities of Harappa, near Lahore, and Moenjodaro, about 250 miles north of Karachi. These two cities apparently are the products of the common Harappan civilization which flourished 4,500 years ago, from 3000 B.C. to 1500 B.C. Today they are still among the earliest known evidences of town planning. From the time of their discovery until the late 1930's they were subjected to intensive archeological activity, which brought forth clear evidence that an extensive and sophisticated culture existed in a region which extended from the foothills of the Himalayas to the Arabian Sea, from the borders of Iran into what, today, is India. Moenjodaro, a city of a square mile, is the larger and more impressive of the two sites. It has been painstakingly excavated and its archeological finds carefully preserved.

For Pakistan, Moenjodaro is more than an archeological site. It is the symbol of the country's history and of a unique contribution that was made to human development by a civilization which held sway over that part of the world for at least a millenium and a half. For the world's archeological community, and particularly for those concerned with the history of urbanism, Moenjodaro is a splendid example of ingenuity and far-sightedness. From the standpoint of planning, sanitation, and social organization this city anticipates developments which only blossomed several thousand years later. In addition to its urban importance, the Harappan civilization is notable for the obvious sophistication of its alphabet, still undeciphered, for the high quality of its ceramics, and for the unique beauty of its seals.

The excavated ruins at Moenjodaro, which are located a few hundred yards from the meandering course of the Indus River, have been threatened since their discovery by two main causes of destruction: the unpredictable river, whose course changes slightly with almost every rainy season, and highly saline ground waters which have caused the serious deterioration of the excavated remains. The buildings, acting as a wick, draw up water from the sub-soil. The water carries with it dissolved salts which upon drying crystallize on the surface of the bricks causing them to crumble. The effect of this continuing process has led to the progressive disintegration of entire buildings and is rapidly turning an irreplaceable part of urban history into an irretrievable rubble heap. Archeologists suggest that in 20 to 30 years most of the walls will collapse.

Since the 1960's, the Government of Pakistan has appealed to the international community for assistance in saving Moenjodaro by diverting the river, lowering the water table, providing remedial action to stabilize threatened buildings and preventing disintegration of those that have not yet been seriously damaged. UNESCO responded to Pakistan's appeal and in 1974, agreed to lead an international fund-raising campaign. In the interim, the Government of Pakistan, with the assistance of UNESCO, has conducted an intensive series of technical studies relating to river control, dewatering and other methods conducive to the eventual preservation of the site.

To date, the international campaign has produced over $1 million in contributions, mainly from the Governments of the Federal Republic of Germany and Japan. Moreover, the World Food Program of the Food and Agricultural Organization has allocated, as part of a broad aforestation project for Pakistan, $500,000 for necessary landscaping. This will include a shelter belt of salt-tolerant trees to reduce wind erosion and the deposition of salts, and the planting of salt-absorbing grass to assist in lowering the water table. Landscaping the archeological areas and visitor facilities with plants similar to those thought to have grown there 4,000 to 5,000 years ago is also planned.

An international consultative committee has been charged with advising UNESCO and the Government of Pakistan on the project development and will meet in early February, 1979 to review final plans. The Government of Pakistan itself is ready to allocate resources so that a start can be made to implement the final recommendations of the committee.

Although full details of the plans will not be decided until the committee meeting in February, it is anticipated that the work will be carried out in several stages beginning with river control, a series of tube wells to lower the water table, and a diversion canal. These steps are expected to arrest the most serious hazards to the continued existence of the Moenjodaro remains. The second stage will extend the number of tube wells, and carry out intensive remedial action which will take two forms:

-- consolidation and treatment of the remaining structure; and

-- planting of the area with a variety of salt-resistant plants which will consolidate the soil and provide a suitable protection from wind-driven sands.

The total cost of the project is anticipated to be over $10,000,000. The proposed contribution from the United States, in nonconvertible Pakistani currency, is the equivalent of four million U.S. dollars. The participation of the United States in the salvage of Moenjodaro has been considered to be in the national interest by the Department of State.

The Institution is seeking this appropriation at this time for several reasons. Since all U.S. foreign currency accounts are subject to diminution over time by inflation and devaluation, a positive U.S. response to this international appeal at a later time could require the contribution to be made in hard dollars rather than in the U.S.-owned Pakistani rupees which are available currently. Further, with the adoption of a final plan for arresting the continued degradation of Moenjodaro, it is desirable to stimulate other UNESCO countries to pledge support. The role of the U.S. will be most important in this regard. If significant portions of the Moenjodaro ruins are to be rescued, steps must be taken now.

The Smithsonian is making this request because of its traditional interest in archeology and cultural history. It was the agent for conveying the final U.S. contribution to the International Campaign to Save the Nubian Monuments--the successful effort to move the Temples of Philae. The Smithsonian Special Foreign Currency Program has supported the significant archeological investigations of Moenjodaro and other Harappan sites which have added greatly to knowledge of this civilization.

As with the Nubian monuments of Egypt, preserving the remains of Moenjodaro will benefit greatly generations of scholars to come. The network of scholarly relations between American institutions and their counterparts in Pakistan will be developed and strengthened. Indeed, the maintenance of cultural ties between nations can provide a link which endures through the shifting of other relations and insures continued contact between nations. Finally, support by the United States for the preservation of this unique historic site is in the spirit of the UNESCO convention concerning the protection of the world culture and natural heritage (the World Heritage Convention) which was ratified by the United States in 1973.

OBLIGATIONS OF TOTAL PROGRAM FUNDS BY COUNTRY
(dollar equivalents)

	FY 1978 Actual	FY 1979 Estimate	FY 1980 Estimate
Burma	$ 0	$ 30,000	$ 23,000
Egypt	2,324,000/1	1,619,000	1,624,000
Guinea	3,000	3,000	13,000
India/2	1,762,000	1,739,000	1,705,000
Pakistan	222,000	409,000	4,435,000/3
	$4,311,000	$3,800,000	$7,800,000

/1 Includes final payment of $1,000,000 equivalent in excess Egyptian pounds for the salvage of the Temples of Philae.

/2 Includes transfers to the State Department for "Shared Administration Expenses" and transfers to NSF Science Information Program for Translations.

/3 Includes $4,000,000 equivalent for a U.S. contribution to the international effort to preserve Moenjodaro.

STATUS OF SMITHSONIAN SFCP FUNDS
(dollar equivalents)

	FY 1978 Actual	FY 1979 Estimate	FY 1980 Estimate
Unobligated Balance, Start of Year	$ 282,000	$ 60,000	$ 60,000
Appropriation	4,000,000	3,700,000	7,700,000
Recovery of Prior Years' Obligations	89,000	100,000	100,000
Unobligated Balance, End of Year	-60,000	-60,000	-60,000
Total Obligations	$4,311,000	$3,800,000	$7,800,000

TAB C

FACILITIES PLANNING, RENOVATION, RESTORATION, AND CONSTRUCTION

FACILITIES PLANNING, RENOVATION, RESTORATION, AND CONSTRUCTION

Summary

Account	FY 1978 Appropriation	FY 1979 Appropriation	FY 1980 Estimate
Construction and Improvements, National Zoological Park	$2,500,000	$3,900,000	$6,550,000
Restoration and Renovation of Buildings	2,425,000	2,100,000/1	4,900,000
Construction:			
Museum Support Center	325,000	575,000	20,600,000
South Quadrangle Development Planning	--	--	500,000
Totals	$5,250,000	$6,575,000	$32,550,000

The FY 1980 appropriation request for Construction and Improvements at the National Zoological Park will be used to continue progress on the implementation of the approved Master Plan for the improvement of the animal and public facilities and to perform essential renovation, repair and improvement projects at the Rock Creek Park Zoo and at Conservation and Research Center in Front Royal, Virginia. The master plan development scheduled for this budget year encompasses: continued construction and renovation of the Central Area including the Small Mammal and Reptile Houses; the design of the Aquatic Habitats exhibit; and the design of the parking facility. Necessary restoration and renovation work, such as road resurfacing and grounds improvements, at the Rock Creek Zoo and Front Royal Conservation Center will continue.

The Restoration and Renovation of Buildings appropriation request consists of installation of fire detection and suppression systems; improved access and mobility for disabled staff and visitors to the Smithsonian facilities; correction of hazardous conditions so as to improve the security and safety of the Smithsonian collections, staff and visitors; facility development at outlying Smithsonian research sites including the Mt. Hopkins Observatory in Arizona and the Smithsonian Tropical Research Institute in Panama; facade and roof repairs; design, replacement and repairs to heating, ventilating and air conditioning systems in several museum buildings; renovation of space to provide additional storage areas for the Smithsonian Institution Libraries; and general repairs and improvements in order to preserve and maintain the Institution's buildings in safe and working order.

Funds requested in the Construction appropriation will be used to begin construction of the Museum Support Center. The Center will provide urgently needed additional space for the collections and will enable a significant amount of space in Mall museums to be used for their intended exhibition, education and research purposes. The Museum Support Center will include facilities for the research and study of objects to be housed there and for the Conservation-Analytical Laboratory. By relocating the Conservation-Analytical Laboratory to the Center, the Institution's overall capability in conservation research, training and treatment will be strengthened.

A final project to be initiated with construction funds requested in FY 1980 is the architectural/engineering planning and design of proposed facilities in the South Quadrangle, bounded by the Smithsonian Institution Building, the Freer Gallery of Art, the Arts and Industries Building and Independence Avenue. The facilities will house a new center for exhibition and study of Oriental art, the Museum of African Art, central library and rare book needs and underground administrative, support and parking requirements.

Justification for these programs and projects appear in the following sections.

/1 A program supplemental of $300,000 was requested in FY 1979 for the Museum of African Art which requires renovations to bring it up to acceptable standards for health and safety of the public, staff and collections, and to meet appropriate building code provisions.

CONSTRUCTION AND IMPROVEMENTS, NATIONAL ZOOLOGICAL PARK

1978 Appropriation.....$2,500,000
1979 Appropriation.....$3,900,000
1980 Estimate.....$6,550,000

This appropriation is for use at the National Zoological Park to fund repairs, alterations and improvements to existing facilities, including exhibits; to prepare plans and specifications for construction; and to perform renovations, restorations and new construction for implementing the Master Plan approved by the Commission of Fine Arts and the National Capital Planning Commission in FY 1973.

The requested 1980 appropriation will be used as follows:

Central Area Construction	$4,300,000
Aquatic Habitats Design	500,000
Parking Facility Design	250,000
Renovations, Repairs and Improvements	
National Zoological Park -- Rock Creek	400,000
Conservation and Research Center -- Front Royal	1,100,000
Total	$6,550,000

Status of Construction Program

The National Zoological Park has been undergoing major renovation and improvement over the past several years in implementation of the Master Plan. With the transfer of selected breeding functions to Front Royal, the elimination of costly projects and the scaling down of others, the total Rock Creek renovation program has been reduced from an original plan of 41 major projects, with a cost estimated at $118,000,000 to 30 projects and a current estimate of $61,000,000. Further revisions were made in the past year including reducing the scope of a parking facility and eliminating plans for a restaurant for Zoo visitors. These revisions, which were made in the interest of economy, will not have major programmatic impact. The National Zoo is slightly more than halfway through its construction program, a plan which will make the Park one of the world's standards of fine zoos. The funds appropriated to date have been spent on 19 new exhibits and support facilities either completed or under construction. FY 1979 will see the opening of new exhibits for beavers, river otters, seals, and sea lions. Also in early FY 1979, construction was started on the new Great Ape facility, which will provide modern housing for orangutans and gorillas. This fully controlled environment will feature interior glass-fronted habitat spaces and spacious exterior yards. Approximately $30 million will be required in future years to complete a number of additional projects.

To ensure an orderly development program with minimum disruptions to animals and to visitor circulation, construction projects around the periphery of the Park were accomplished first. Design work now has been completed for a cluster of projects in the Central Area. The new Great Ape House also will be included in this cluster. Funds are requested in FY 1980 to continue construction of the Central Area, including renovation of the old Reptile House and the old Small Mammal House and construction of a Monkey Island. Planned for future years are conversion of the basement of the Reptile House to a nocturnal exhibit, a new crocodile exhibit, the aquatic habitats exhibit, the completion of a multi-level parking facility, entranceway and Olmsted Walk exhibits and services, and the improvement of clinical health and research facilities.

To meet the goals specified by the Zoo's planned development program, the following projects are proposed for FY 1980:

Central Area Construction ($4,300,000). This appropriation will permit funding of most of the remaining projects in this area including renovation of the old Reptile House, total renovation of the old Small Mammal House, and construction of a new Monkey Island.

The Reptile House was constructed 50 years ago and has not been much improved since that time. It is to be remodelled to accommodate new exhibitions and larger exhibit space for the reptiles. The new exhibit techniques will make the native habits more dramatic for the viewer and more healthful and safe for the animals. All mechanical and electrical systems in the buildings are to be renovated and the cages and exhibits reconstructed.

The Small Mammal Building, which was constructed in 1937 and houses such animals as golden marmosets, small cats, skunks and martins, also is deteriorating badly. It is no longer usable for implementing modern concepts for zoological exhibits. The plan proposes to completely renovate the building by removing all cages and partitions and provide complete modern glass-fronted cages and exhibits. All mechanical systems for the building will be replaced.

The final Central Area project to be funded as part of the FY 1980 request is a Monkey Island exhibit with a moat to serve as a containment barrier. In addition to the major exhibit elements, the Central Area will be fully landscaped and improved with new walks and graphics.

Aquatic Habitats Design ($500,000). The Master Plan includes six aquatic habitats projects which are to be recombined in a central location for purposes of common water systems support. This appropriation will permit preparation of final plans and specifications for the last cluster of major exhibits in this group. This cluster will include exhibits for manatee, platypus, sea otters, a coral reef, a tidal basin and related environments. These exhibits will be located at the south end of the park and be an extension to the series of already existing aquatic exhibits for beavers, river otters, seals, sea lions and polar bears.

Parking Facility Design ($250,000). By reducing the scope of the second phase construction of the General Services and Parking Facility a savings of $5,000,000 can be realized. The original cost estimate for this facility was $21,500,000. The reductions include retaining the existing roadways rather than regrading them as proposed in the original plan. The change will delete upper-end road level access to the parking level. Total access and exit will be achieved through interval ramps at the lower end. A pedestrian tunnel into the Central Area of the Zoo will be eliminated as will a large mezzanine for housing the Zoo's police and safety officers. The funds requested here will be used to complete the design work for the revised construction plan.

Renovation, Repairs and Improvement ($1,500,000). An amount of $1,500,000 is required to continue a program of renovation, repair and preventive maintenance of existing facilities at both the Rock Creek Park and Front Royal locations.

There are 60 facilities of varying ages at the Rock Creek location and 18 miles of heavily used paths and roadways. A funding level of $400,000 is necessary to provide the repairs and renovations necessary to maintain these facilities in safe and functioning order. The funds would be used to complete necessary tasks in mechanical, electrical, plumbing and support systems; grounds, path and roadway repairs; animal support and housing repairs; and temporary relocation of animals. Particular projects include pothole patching, curb repairs and pathway paving for convenience and safety of the visitors; upgrading of roofing in the paddocks and sheds of the hardy-hoofed stock; and landscaping to cope with the effects of erosion.

The balance of $1,100,000 requested is to be used at the National Zoological Park's Conservation and Research Center at Front Royal, Virginia, to accomplish the work necessary for animal programs and to permit the Center to accelerate its development program so that it can complement the development at Rock Creek Park. The following items comprise the planned projects at Front Royal for FY 1980:

-- Small Mammal and Bird Breeding Complex. This complex will provide back up breeding for small mammals and birds. The small mammal breeding has been conducted at Rock Creek but must be transferred to Front Royal as a result of the decision to renovate the original Monkey House as opposed to constructing a new one. The part of the complex to be used for small mammal breeding will be constructed with funds requested in this budget. Funds to complete the second phase of work for the complex, which will provide housing for the delicate birds that are hatched at the Conservation and Research Center, will be requested in future years. These birds are currently housed in inadequate facilities.

-- Centralized Hoofed Stock Management Complex. This barn complex will centralize management of surplus hardy-hoofed animals from all major paddocks. An existing barn of approximately 12,000 square feet will be completely renovated and an adjacent 90 acres will be fenced to form three large holding paddocks. This area will be used for separating out and holding males from existing herds and can be used to contain the largest and most aggressive hoofed stock at the Center.

-- Visitor Education Center. The Visitor Education Center is proposed as a response to the ever increasing demands to accommodate school groups, general visitors and other organized groups who wish to have a meaningful visit. The total facility will include a modestly sized building for visitor orientation, conservation and study, small multi-purpose exhibits, and support areas. The surrounding area of approximately 100 acres will be fenced to provide exterior exhibit areas and a visitor walk of approximately two miles in length. The funds requested in this budget will be used for the design work and the access and site preparation for the building. The current estimated cost of the entire project is approximately $300,000.

-- Miscellaneous Renovations and Repairs. Many of the old structures at Front Royal are badly deteriorated and in need of major repairs. Funds requested here will be used to upgrade these structures by performing repairs to the electrical wiring and the plumbing and ventilation systems. Funds are also needed to continue a program of road and pathway renovation. Road resurfacing and grounds improvements permit easier access for the security patrols necessary to ensure the safety of the Center's animals.

Construction and improvement work is accomplished primarily by contract except in instances when suitable contractors cannot be located or their estimates are exorbitant in relation to the proposed job. In such cases, accomplishment of the work by other means, such as the purchase of supplies, materials and equipment and the use of current staff or temporary labor, is the most cost-effective solution. Furthermore, it is occasionally necessary to fund other expenses from this account, particularly those associated with the displacement of animals as a result of the construction program.

(1,000s)

NATIONAL ZOOLOGICAL PARK
Construction Program
1974-1984

Estimates include cost escalation to March, 1980

Activity	1974	1975	1976	TQ	1977	1978	1979	1980	1981	1982	1983	1984	Reprogrammings /1	TOTAL
	Fiscal Years													
I. Master Plan														
Lion-Tiger Facility	3,000 /2													3,000
Elephant/Bird Houses	160	2,970											+30	3,160
Education-Administration Building		2,500											-156	2,344
General Services and Parking Facility	300	2,700	4,000					250		8,500 /3			+836	16,586
Lower Rock Creek Valley	100	400	2,500											3,000
Beaver Valley Area		80	490		5,840								-350	6,060
Central Area		100		900		250	3,000	4,300	1,840				-360	10,030
Waterfowl Pond and Small Cats		20				500								520
Aquatic Habitats								500	8,800					9,300
Health & Research Hill (Incl Holt House Renovations)										100	3,000			3,100
Master Graphics			100		100				100					300
Entranceway & Olmsted Walk Exhibits										200	3,000 /4			3,200
Subtotals	3,560	8,770	7,090	900	5,940	750	3,000	5,050	10,740	8,800	6,000	--	--	60,600
II. Rock Creek Renovations	230	650	600	160	440	300	450	400	450	450	450	450 /5	--	5,030
III. Front Royal Conservation Center														
Necessary Repairs and Improvements		/6	700	380	200	1,450	450	1,100 /7	2,000 /7	1,600	1,600	1,600 /5	--	11,080
GRAND TOTALS	3,790	9,420	8,390	1,440	6,580	2,500	3,900	6,550	13,190	10,850	8,050	2,050	--	76,710

/1 Reprogramming of funds between projects accomplished in accordance with Congressional guidelines on reprogramming.
/2 Excludes $275,000 for planning appropriated in FY 1973.
/3 Citizen participation through parking revenues will contribute $1,000,000 or more by 1982.
/4 Excludes restaurant.
/5 In subsequent years major repairs and maintenance will require $450,000 in Rock Creek and $300,000 at the Conservation & Research Center annually.
/6 Amount of $125,000 appropriated in FY 1975 under Restoration and Renovation of Buildings Account.
/7 Incorporates visitor conservation education services.

RESTORATION AND RENOVATION OF BUILDINGS

1978 Appropriation.....$2,425,000
1979 Appropriation.....$2,100,000 /1
1980 Estimate.....$4,900,000

This account is used to fund major repairs, alterations and improvements of a long-term nature and benefit. (This request does not include the National Zoological Park which is presented separately in this budget.) Construction of both major and minor additions to existing facilities and new temporary or minor permanent buildings or other facilities is undertaken with the monies made available. Facilities planning, studies and related expenses also may be funded from this account. Projects undertaken support the research, care and protection of collections; the safety and security of the public and staff; and the maintenance and development of a valuable physical plant and the surrounding natural areas. Work is accomplished primarily by contract except in instances when suitable contractors cannot be located or their estimates are exorbitant in relation to the proposed job. In such cases, accomplishment of the work by some other means (such as the purchase, with funds made available with this appropriation, of supplies, materials, and equipment and of the use of staff or temporary labor) is the most cost-effective solution.

With funds now available, the Institution is carrying out several significant projects, the most notable of which are the exterior repairs to the Renwick Gallery, phased renovation of the Arts and Industries Building, the site development at the Mt. Hopkins, Arizona Observatory, and continued installation of fire detection and suppression systems.

An amount of $4,900,000 is requested in FY 1980 for the following projects:

1.	General repairs and improvements	$ 762,000
2.	Facade and roof repairs	1,425,000
3.	Fire detection and suppression systems	725,000
4.	Access for disabled, safety and security and correction of hazardous conditions	500,000
5.	Heating, ventilating and air conditioning repairs	588,000
6.	Mt. Hopkins, Arizona, Observatory site development	505,000
7.	Smithsonian Institution Libraries space improvements	200,000
8.	Tropical Research Institute library	195,000
	Total	$4,900,000

Details of these projects appear in the following justifications.

1. General Repairs and Improvements ($762,000).

The Smithsonian has 10 major museum buildings which range in age from new to well over 100 years old and contain approximately 2.6 million net usable square feet with replacement

/1 A program supplemental of $300,000 has been requested in FY 1979 for the Museum of African Art which requires renovations to bring it up to acceptable standards for health and safety of the public, staff and collections, and to meet appropriate building code provisions.

value of several hundred million dollars. In addition, it is anticipated that the Museum of African Art will become part of the Smithsonian during FY 1979. The Institution also has in its space inventory (not including rental properties) many lesser structures containing about 0.5 million square feet used for collections management and administration. Several thousand acres of land are dedicated to research, conservation and education. Heavy public use of these facilities, general deterioration because of age and weathering, visitor and staff safety requirements, and the improvements necessary to keep pace with program changes create requirements for regular attention to Smithsonian buildings and the mechanical and electrical systems contained within them. Such requirements are beyond the workload capability or the technical expertise of the Institution's maintenance staffs and the funding capabilities of the various museums and bureaus. (Projects are carried out primarily by contract with funds designated for the General Repairs and Improvements category.)

The FY 1980 request of $762,000 was arrived at after careful review through the normal budgetary process. The procedure followed consisted of the submission of needs by individual bureaus in the spring of 1978 to the appropriate assistant secretary and the Office of Facilities Planning and Engineering Services for evaluation. Projects were then selected by a group composed of the assistant secretaries, the Director of Support Activities and the Treasurer, based on the evaluation of those projects considered to be most essential in the budget year. Final decision on projects to be included in this budget request was made by the Under Secretary and the Secretary.

The original list of bureau needs totalled more that $2,000,000 for a variety of electrical, plumbing, mechanical and structural repairs and improvements. Added to this list are projects totalling approximately $1,000,000 that were included in the FY 1979 budget request, but not funded, and that must still be accomplished. Included in these latter projects are urgently needed repairs to heating, cooling and electrical systems.

A recent analysis of the remaining fund balance in the General Repairs and Improvements category indicates that this account will be virtually depleted mid-way through FY 1979. An extensive review of all categories in the R&R account that received funds for FY 1979 has indicated that approximately $200,000 may be redirected to cover the most urgent and immediate requirements. However, given the age, condition and historical character of Smithsonian buildings, this amount is not sufficient to undertake repairs which must be accomplished before major problems develop. It should be pointed out that the Smithsonian, unlike most Federal agencies which rely on the General Services Administration for renovations and repairs, is responsible for the repair and maintenance of its own buildings.

An amount of $762,000 is sought in FY 1980 to carry out a number of specific and generally major projects including those involving electrical and plumbing systems, lighting improvements, space alterations for programmatic requirements and sidewalk resurfacing. Specific plans include such work as replacement of electrical network protectors, high voltage cables, and several thousand feet of water line; repairs to piers and restroom facilities; installation of an emergency generator; and alterations to add basement storage space. These repairs are essential in order to assure safety of electrical and plumbing systems and to provide for the most efficient use of space and facilities. Moreover, annual funding sought in this account is essential to the planning, engineering and repair needs of other projects that arise unexpectedly. In a physical plant as complex and varied as that of the Smithsonian, emergency repair needs inevitably arise. These require immediate attention to prevent further and more costly work. The funds requested for this account in FY 1980 will be used to accomplish both the specific types of work noted and emergency requirements as they arise.

2. Facade and Roof Repairs ($1,425,000).

Maintaining the integrity of the exteriors of all Smithsonian buildings so that they remain water and weather protective is critical to prevent major structural damage and deterioration and to provide a weather tight environment for collections. The age of many

of the Institution's facilities and the collections and equipment within them make work in this category a high priority. An amount of $1,425,000 is requested to accomplish repair, replacement and renovation work related to exterior and roof damage.

An amount of $200,000 is required to continue a phased program of repairing the terrace of the History and Technology Building. The terrace serves as both a pedestrain walkway around the building and as the roof to interior basement work, machinery, and storage space. Apparent original construction deficiencies have led to general deterioration of the waterproofing under the paving material and consequent extensive leakage into work and collection areas. Approximately 50 percent of the repair work, including the removal and replacement of the concrete slabs and waterproof membrane, has been completed with the funds ($550,000) previously made available. The current estimated cost of the entire phased program is about $950,000. The FY 1980 request of $200,000 is to be used to continue this project with the balance of funds to be requested in future years.

An amount of $600,000 is requested to continue restoration of the Renwick facade. Under the auspices of the General Services Administration, restoration of the Renwick Gallery facade was undertaken in FY 1968, using a synthetic material matching the existing facade. In FY 1976, the coping and exterior roofing materials began cracking, and pieces of the coping fell, creating an obvious danger to public safety. An initial investigation revealed that the materials used to restore the exterior masonry were not adhering to the building. Detailed inspection and analysis of the building's surface were subsequently performed by expert consultants. Moisture penetrating the surface, aggravated by freezing conditions in winter, had caused cracking and scaling on both the horizontal and vertical surfaces of the stone facade of the building. There was also evidence of roof leaks.

With funds previously appropriated ($300,000) priority was given to the construction of a covered pedestrian shelter over the sidewalk adjacent to the building. In addition, the removal of loose pieces of stone and masonry was undertaken. Experiments with different patchwork to find a material more resistant to the corrosive elements of weather have been performed. It is now believed that it is necessary to restore the entire exterior, replacing approximately 80 percent of the stone. Several restoration methods are currently under consideration, including the replacement of all existing deteriorated sandstone with natural sandstone of close color and texture to the original. Measured drawings of all stone work, necessary to provide a detailed and accurate cost and time phase program for the replacement of stone, are now being prepared.

Due to the highly specialized nature of the work and uniqueness of the materials involved, the total restoration is expected to cost approximately $5,500,000.

About $2,500,000 of roof and facade work remains to be done to complete the renovation of the Arts and Industries Building and to protect work already accomplished. This work is essential to ensure water-tightness and energy efficiency. Projects of a particularly pressing nature include completion of roof repair, window glazing and sash repair or replacement, masonry painting, granite resurfacing, and replacement of downspouts and drains. In FY 1980, an amount of $225,000 is sought to complete necessary analysis, design, documentation and cost estimation for the remaining renovation of the facade and roof.

The balance of the FY 1980 facade and roof request in the amount of $400,000 will be used to fund a variety of work throughout Smithsonian facilities including such items as reglazing of exterior windows, window and frame repairs, caulking, repointing of the masonry exterior, and minor roof repairs.

3. Fire Detection and Suppression System ($725,000).

The Institution is making a continuing effort to identify specific needs for fire detection and suppression systems in all of its major facilities. Fire detection systems are presently lacking in many public areas and should be installed for the protection of visitors,

exhibits and property. Similar safeguards are needed in areas where museum collections are housed and where research by staff and visiting students and scholars takes place. Other fire protection needs include the addition of booster pumps to provide adequate water pressure, the installation of approved fire doors to retard the spread of heat and smoke, and the installation of various systems, such as automatic sprinklers, to suppress fires.

While improvements are being undertaken in all buildings, particularly when facilitated by such actions as changing exhibits, major emphasis is being placed initially on correcting deficiencies in the Natural History Building, the largest space with the least protection. At current rates, it is estimated that approximately $4,000,000 will be required to safeguard properly the building and collections against the hazards of fire. In FY 1978 an overall plan was initiated and the installation of sprinkler detection and water distribution systems is now underway. Priority is being given to protecting the most critical areas which represent the highest potential of fire and which are immediately available for improvements. In FY 1980, an amount of $300,000 will be required to continue implementation of the plan.

Other projects proposed for FY 1980 include the installation of sprinkler and smoke detection systems in the History and Technology Building, the Fine Arts and Portrait Galleries Building, the Miller House of the Cooper-Hewitt Museum, the maintenance shop at the Smithsonian Tropical Research Institute in Panama, and the various facilities at Mt. Hopkins, Arizona, the Chesapeake Bay Center and Silver Hill. Funding of $425,000 is sought for these projects.

4. Access for Disabled, Safety and Security and Correction of Hazardous Conditions ($500,000).

Many of the Smithsonian Institution buildings and facilities were designed and constructed before the development of the current standards of public safety and access for the disabled. As a result, the buildings require modifications to eliminate or mitigate existing architectural barriers and hazardous conditions. The modifications required include such projects as providing adequate building access; installing elevators, lifts or ramps; renovating restroom facilities; providing access to, and wheelchair spaces within, auditoriums; eliminating slippery walking surfaces; correcting fall hazards from parapet walls or pedestals; installing guard railings; and providing adequate exit capacity. Projects in the planning stage or currently underway with funds appropriated in previous years include such work as the installation of an elevator in the Arts and Industries Building in order to provide wheelchair access to the mezzanine level; modifications to the north entrance of the Natural History Building; construction of a ramp entrance at the Renwick Gallery; and renovation of restroom facilities in the Smithsonian Institution Building.

In FY 1980, an amount of $500,000 is requested, the major portion of which will be used to continue improvements designed to make all Smithsonian buildings fully accessible to disabled visitors and staff. Restroom modifications are planned for the Renwick Gallery, the Fine Arts and Portrait Galleries Building and the Arts and Industries Building; improved entrance access is necessary at the Freer Gallery and Smithsonian Institution Building; and elevator installation is required for wheelchair access to the west mezzanine of the third floor gallery at the National Portrait Gallery. With funds appropriated in previous years, improvements to the Hirshhorn Sculpture Garden have been designed to provide easier access for the disabled into and within the Garden. Proposed modifications, which will begin in FY 1979, will include the construction of ramping and associated mechanical and electrical work, complete resurfacing of the middle and lower levels of the garden, and various landscaping improvements. Funding is required to continue this project in FY 1980.

Other security and safety measures for which funds are requested include such projects as the installation of a sawdust exhaust mechanism for the cabinet shop in the Natural History

Building, improvement of exterior security lighting for several buildings, and installation of a gallery security system.

5. Heating, Ventilating and Air Conditioning Repairs ($588,000).

The Institution's responsibility for the operation, maintenance and upgrading of its plant heating, ventilating, air conditioning, and humidity control equipment (HVAC) is essential to daily activity in each museum and gallery, and to collections requiring a stable environment. The need to make yearly replacements and repairs to steam and chilled water lines and equipment and air handling equipment, and to upgrade humidity systems in all but the newest buildings is becoming increasing important. Beginning in FY 1980, the Institution will identify these needs separately in its budget presentation and is requesting an amount of $588,000 for these purposes.

Included in the amount requested is approximately $64,000 to construct a new chilled water supply and return line for the Freer Gallery. Completion of a rehabilitation of the Freer's HVAC systems which are now in marginal operating condition following numerous repairs, is planned for FY 1981 and is expected to cost approximately $700,000. An additional $270,000 will be needed in FY 1980 to plan properly and design a replacement and upgrading of the components for the HVAC systems at the Fine Arts and Portrait Galleries Building. Presently, this building and its contents suffer with poor ventilation and inadequate control of temperature and humidity. The total cost for this project is anticipated to be in excess of $4,000,000 and could require three or more years for completion. Future year budgets will include appropriation requests which will be based on information and precise cost estimates developed in the planning process.

The balance of funding requested for HVAC work in FY 1980 ($254,000), is needed for a number of specific repair projects in Mall buildings and correction of deficiencies, particularly in the Natural History and the Museum of History and Technology Buildings. Presently, heating coils need immediate replacement at the Natural History Building and temperature and humidity modifications are required for the electron microprobe and the scanning electron microscope laboratory. At the Museum of History and Technology Building several reheat coil replacements and HVAC control repairs are required along with modifications to improve temperature and humidity control for housing of the rare book collection and the Warshaw Collection of Business Americana.

6. Mt. Hopkins, Arizona, Observatory Site Development ($505,000).

The Smithsonian program of site improvements at the Mt. Hopkins, Arizona Observatory over the past several years has had its goal the provision of safe and efficient facilities for staff and visiting scientists. The demand on these facilities will increase substantially when the Multi-Mirror Telescope (MMT)--the world's third largest astronomical telescope--is put into operation in the spring of 1979. In FY 1980, a total of $505,000 is requested to continue the execution of this program.

An amount of $330,000 is requested for the design and construction of a dining/common room building at the summit of Mt. Hopkins, (elevation 8,585 feet) site of the MMT. This building will complement the dormitory being constructed early this year with funds appropriated in FY 1978. Together, these facilities represent "home" for astronomers and night-time staff during their one or two week stays on the mountain. Observing astronomers work long night-time hours: typically 12 or 14 hours at a time. With the dormitory, scientists will have adequate facilities for sleeping during the day-time between shifts at a location remote from planned construction. A separate location for activities such as cooking, eating and planning sessions is required as well. The proposed dining/common room building will accommodate these needs. Additionally, restrooms either accessible from the outside or detached from the building, are planned for the visiting public.

An amount of $25,000 is sought for renovation of two existing buildings--a barrack-like prefabricated metal dormitory structure erected in 1971 and a gamma-ray detection research facility no longer being used. The original plans for Mt. Hopkins called for the construction of four new dormitories: separate facilities for day-time and night-time sleeping at both the Mt. Hopkins summit and at the 7,600 foot elevation ridge area where a number of observing instruments are located. Initial experience has suggested that not all of these buildings will be needed. Overall dormitory requirements will become more apparent after a year of routine operation of the MMT. In the interim, significant cost savings can be realized by renovating the existing dormitory at the 7,600-foot ridge to enable it to function as an adequate night-time sleeping facility for individuals based both at the summit and the ridge. Upgrading of the lighting, furnishing and sound proofing of the building (to the extent possible in a metal structure) are planned. Conversion of the existing research facility into a dormitory for ridge-based astronomers is planned as well.

An amount of $150,000 is sought to continue the plan of converting the single-lane, unpaved access road into a safer in-sloped, all-weather road. Two recent developments have resulted in funds being diverted from actual road construction. In the past year the unprecedented rains in the Southwest caused serious damage on two occasions to short sections of the road at the ridge and to the ascent road to the ridge. As a result of these storms and the consequent damage, it was necessary to reallocate some funds designated for road improvements in order to complete critical road repairs. Additionally, in view of the scheduled MMT opening and the anticipated increased usage of the Observatory site, it has become desirable to redirect a portion of the funds appropriated for road improvements in FY 1979, in order to complete the essential water supply system. Changes to the design of the proposed system have resulted in higher costs. The effect of these developments is that work planned for the current year has fallen short of the plan. Available funds in FY 1979 will be used for limited paving in areas that produce dust around the MMT where dust particles could interfere with the operation of the instruments. The newly paved road will also serve as a test area to determine whether additional paving should be considered from the standpoints of safety and ease of maintenance. Funds sought for FY 1980 will be used to dig larger culverts to improve drainage in some sections and to complete in-sloping of the road.

7. Smithsonian Institution Libraries Space Improvements ($200,000).

With funds appropriated in previous years approximately 1,400 square feet of additional space was created to meet important library needs by installing mezzanines in the Smithsonian Institution Libraries area of the Natural History Building. Collections housed here serve the overall Institutional library needs as well as those of the Museum of Natural History in particular. The project involved the decking and remodeling of the reading room and central space areas of the library in order to provide adequate work space and display shelving. The work done also included modifications to the heating, ventilating, and air conditioning systems to serve the mezzanines, and preparations for further additions of this second level decking.

Recent developments in library procedures and techniques, related for the most part to the automated data systems, have resulted in expanded operations and in increasingly heavy use of existing space. The space is no longer adequate for efficient use of the four on-line cataloguing terminals and the bibliographic data base terminal and printer. Furthermore, the special projects group, which works frequently with bulk loads of books, is finding it difficult to keep the collections intact as they must be when being processed. In addition, there is a need for work space and a small office for the librarian of the Natural History collections. The space needs for these various functions have been studied thoroughly in an effort to provide means for utilizing the existing space to the greatest extent possible. The studies have determined, however, that the difficulties cannot be resolved without completion of the decking project initiated three years ago. For FY 1980, an amount of $200,000 is requested to extend the second level mezzanines, to modify very

old glass floor decking and convert it into usable space, to extend utility system ducts for the new mezzanine areas, and to install systems furniture suitable for the Libraries' data terminals. The project will add approximately 2,000 square feet of efficiently designed work space to the library facilities in the Natural History Building.

8. Smithsonian Tropical Research Institute Library ($195,000).

The Smithsonian Tropical Research Institute (STRI) library contains the most comprehensive collection in Latin America of books and journals on tropical biology. The permanent collection consists of over 17,000 books and over 450 different journals subscribed to annually and is housed in a two-story U-shaped structure built in 1914 as a laboratory and mortuary for the Gorgas Hospital. Scientists, offices, laboratories, a computer room and a conference/seminar room are also housed within this facility. The present library space has reached its capacity in terms of supporting the weight of library stacks. It is essential that additional space be provided to accommodate the growing library collection needed to support STRI's research objectives.

The most economical and immediate way to resolve the need for additional library space is to cover over the 1,650 square foot parking area that is between two wings of the library building and to convert it into centrally air conditioned stack space. The parking site meets architectural standards for supporting stack areas. An amount of $195,000 is requested to accomplish this work and to install the electrical and other systems necessary to the functioning of the proposed structure.

CONSTRUCTION: MUSEUM SUPPORT CENTER

1978 Appropriation	$ 325,000
1979 Appropriation	$ 575,000
1980 Estimate	$20,600,000

The objects, specimens and works of art housed in Smithsonian museums constitute a tangible and irreplaceable record rich in information on human achievement, historical and cultural development, and the natural environment and its influence on the growth of civilizations. It is a fundamental responsibility of these museums to preserve, manage and use these collections for examination and study, so they will contribute to the expansion of knowledge and understanding. In meeting these responsibilities, the Institution engages in a continuing analysis of space requirements, standards for the care of collections, technology capable of meeting these standards, and procedures for the conservation and storage of collections. Through these efforts, the Institution has documented that additional space, offering properly controlled environments for long-term storage of collections, is critically needed and that this space should be adjacent to office and laboratory facilities for the conservation and study of these collections.

A study entitled "Collections Management and Policy Study" was completed by the Institution in 1977 and addressed questions of present and future collections management practices and factors involved in the growth of collections. Recommendations growing out of this study are being implemented as part of the Support Center planning. Accelerated collections inventory activities, made possible by funds appropriated in FY 1979, will assure complete inventory control over the objects and specimens transferred to the Center upon its completion.

Plans for the development of a Museum Support Center have focused chiefly on the needs of the collections of the National Museum of Natural History. It is in this Museum that the collections have most significantly outgrown the storage and supporting laboratory space available. It has been necessary to convert to storage use exhibition areas, hallways, attics and other spaces that do not provide even minimum environmental conditions necessary for the proper care of collections. Other provisions have been made for the most critical needs of other museums of the Institution.

A tract of 82 acres in Suitland, Maryland has been acquired for the Museum Support Center through transfer from the General Services Administration; use of the land for this purpose has been approved by the National Capital Planning Commission and by local planning boards and commissions.

Authorization

In FY 1975, the President signed Public Law 94-98 which authorized the Regents of the Smithsonian to prepare plans for museum support facilities. The Smithsonian staff, working closely with a consortium of consultants, has analyzed specific existing space requirements and future needs, established optimum standards for care of collections, and completed a planning study to serve as a guide to development of architectural and engineering designs and specifications. Appropriations totalling $900,000 for planning and design were made available in FY 1978 ($325,000) and FY 1979 ($575,000).

On November 2, 1978, the President signed Public Law 95-569, which amended Public Law 94-98 and authorized appropriation of $21,500,000 to the Smithsonian Institution for the construction of the museum support facilities. It also authorized the Smithsonian to transfer appropriated funds to the General Services Administration for purposes of design and construction of the facilities. The Act requires that the Committee on Public Works and Transportation of the House of Representatives and the Committee on Rules and Administration of the Senate approve the final plans and specifications before an appropriation shall be made.

With funds presently available, the Institution has entered into a "Memorandum of Understanding and Agreement" with the General Services Administration for design and construction services, and has transferred $750,000 to GSA for initiating the architectural and engineering design process. No financial commitment has been made at this time with respect to construction. The projected schedule associated with the planning of the Museum Support Center calls for architectural/engineering design selection to be completed in February, 1979; signing of an architectural/engineering contract in March, 1979; and development of appropriate design materials necessary for review by Congress around mid-1979.

The Smithsonian is participating fully in the architectural/engineering process, and has appointed a project coordinator to work closely with the General Services Administration. This continuing liaison will assure that the Institution's program requirements and interests will be fully sustained during the design and construction processes. The selected architect will be required to meet the requirements and standards established by the Institution which are summarized in a document already prepared.

Components of the Museum Support Center

Based on an analysis of existing space requirements and future needs for the storage, care and study of collections, it is estimated that the Museum Support Center will provide 338,000 gross square feet, allowing 255,400 net usable square feet of storage, office, laboratory and conservation space.

The largest component of the Center is visualized as a single-story structure for storage which is designed to protect the collections properly and to make them easily accessible for study and conservation. This space will be allocated largely to the National Museum of Natural History; smaller portions will house collections of the National Museum of History and Technology and other bureaus of the Institution. The National Museum of Natural History has tentatively designated the following percentages of its departmental collections for transfer to the Center: anthropology: 95 percent; botany: 25 percent; entomology: 60 percent; invertebrate zoology: 20 percent; mineral sciences: 50 percent; paleobiology: 20 percent; and vertebrate zoology: 20 percent. These transfers will result in the release of approximately 40,000 square feet of space in the Museum which can be used once again for exhibits. The transfer also will enhance educational and research activities on the Mall and will improve the level of care for remaining collections.

It is essential that the Center provide space for research and study of the collections to be housed there. Adjoining the storage component will be laboratories and offices for the professional and technical staff so that they can have ready access to the collections. Some laboratory, office and storage space will be used as well to house the Smithsonian Oceanographic Sorting Center, presently occupying rented quarters in the Washington Navy Yard. This will provide a more appropriate location for the Center, as it will be adjacent to related program elements of the National Museum of Natural History.

Conservation is essential to the process of caring for collections. Without conservation research and treatment, objects deteriorate and may completely lose their usefulness as scholarly documents. The Conservation-Analytical Laboratory component of the Center will include a collections receiving and fumigation unit; a conservation information referral center; space for the treatment of objects and research on conservation techniques; and a major facility for training staff and visiting interns in scientific theory and practical conservation skills. Locating these facilities in the Center close to the processing and conservation laboratories of the department of anthropology and the Oceanographic Sorting Center will greatly strengthen the Institution's overall capability in research, training and treatment.

A special core facility for shipping and receiving, packing and crating, registration, photography, fumigation and distribution will be incorporated into the Center. Coordination of these activities will provide the Institution with a well-planned facility that will assure greater safety for all objects in movement and storage.

FY 1980 Request

In order to initiate the bidding process for the construction as soon as possible after the completion and approval of final plans and specifications, the Institution requests for FY 1980 the sum of $20,600,000 as authorized by Public Law 95-569.

This sum will be applied in the following manner:

Architectural/Engineering design review and administration	$ 400,000
Estimated construction cost	17,050,000
Construction contingencies	855,000
Reservations (Elevators, lighting fixtures, loading dock equipment and other essential interior fixed equipment for the building)	1,565,000
GSA management and inspection	730,000
	$20,600,000

Appropriation of these funds will permit completion of the bidding by early 1980. It is estimated that the building will be ready for occupancy by the end of 1982.

Estimated Annual Cost of Museum Support Center Operations

Based on operating experience in the Mall museums, it is estimated that the Museum Support Center will cost approximately $1,700,000 for annual operating expenses. This estimate includes funds for approximately 75 additional positions for building management and protection, and for materials, maintenance, repairs and utilities. In addition, the Institution's new conservation programs offered by the Museum Support Center could require as many as 25 additional positions at an approximate annual cost of $450,000; and a one-time cost of up to $1,250,000 for specialized laboratory furnishings, instruments, equipment and training facilities. The increased estimate of one-time costs is due to this year's estimate of more comprehensive conservation training equipment.

CONSTRUCTION: SOUTH QUADRANGLE DEVELOPMENT

1978 Appropriation.....$ 0
1979 Appropriation.....$ 0
1980 Estimate.....$500,000

An amount of $500,000 is requested to initiate architectural/engineering planning and design of proposed facilities in the South Quadrangle for the Freer Gallery, a new center for exhibition and study of Oriental art, the Museum of African Art, central library and rare book needs, and underground administrative, support and parking requirements. Using approximately $100,000 of non-appropriated Trust funds in FY 1979, the Institution will continue to study and document its program and space needs for these activities. The Institution also will investigate subsoil conditions in the Quadrangle as well as the condition of adjacent building foundations and underground utilities. Further study of above-ground conceptual design alternatives is planned, as well as developing estimates of cost including a financing plan this year.

The Quadrangle, bounded by the Smithsonian Building, the Freer Gallery of Art, the Arts and Industries Building and Independence Avenue, has served many purposes in the history of the Institution. As a first step of development, the area recently was enhanced by removing old, inadequate and unsightly structures and creating a Victorian Garden, prepared in time for public use during the Bicentennial Celebration. Further proposed development will meet the following needs.

Presently, the Freer Gallery of Art requires additional space for its principal museum activities. The Gallery has, in its fifty years, acquired a significant study collection and supports excellent programs of conservation, curation and scholarly activity. Also, an additional space is needed to allow the Institution to acquire and borrow, for study and exhibition, objects of Oriental art which never have been available in this country before. In FY 1978, the Board of Regents authorized an expenditure of $30,000 of non-appropriated Trust funds for the development of a preliminary conceptual plan to provide in the Quadrangle a building for added exhibition of Oriental art and an underground addition to the Freer Gallery for museum purposes.

Authorization for the transfer of the Museum of African Art to the Institution was provided by P.L. 95-414, signed by the President on October 12, 1978. The Museum of African Art's collections contain more than 7,000 objects of sculpture, carvings, textiles, paintings and musical instruments, and are representative of every country of sub-Saharan Africa. It is one of the outstanding collections of its kind in existence. The Museum also has more than 100,000 photographs, as well as films and archival collections. It is the intent of Congress that the Museum eventually be relocated from its present site on Capitol Hill. The Quadrangle presents an excellent opportunity to provide a Mall site appropriate for a national museum.

The central services and basic reference collections of the Smithsonian Institution Libraries are presently centered inadequately in the National Museum of Natural History. Rare book collections are scattered throughout the Institution, some of them in environmental conditions which are harmful to aged bindings and papers. Increased use and dependency on new technical aspects of library science, particularly in areas such as computers and conservation, reinforce the need for improved space for these services. Requirements for library space have been thoroughly examined over the last several years and incorporation of such space in the proposed Quadrangle facility will greatly improve technical library services and provide proper environmental conditions for collections, including general and reference literature, rare books, maps, nonprint materials and microforms. Due to the similarity of library operations to technical processes and reference procedures employed by archivists, the advantages of placing the Smithsonian Archives in space adjacent to the proposed central library facilities space also will be examined.

The Institution's proposal for development of the Quadrangle area is composed of three program and building elements which include:

--an above-ground building on the east side of the Garden along Independence Avenue, developed to provide a minimum of about 40,000 square feet for the Museum of African Art, and library space for rare books in lieu of a previously proposed sixth floor addition to the National Museum of History and Technology for this purpose. Above-ground space would be allocated principally for public use and the below-grade space would be used mostly for staff, support and other museum and library purposes.

--a second above-ground building on the west side of the Garden along Independence Avenue will be developed as a new center for the exhibition of Oriental art and Far Eastern studies. Below grade, this structure would be integrated with the underground development of the Garden in such a manner as to be accessible to the Freer Gallery of Art, and to provide additional space to this museum for conservation, research, storage and other museum purposes.

--a third building element, located beneath the Garden, would provide additional below-grade space for up to 300 parking spaces subject to consideration of other space requirements and cost. This project would essentially replace existing parking in the Garden and east of the Arts and Industries Building.

Construction costs for this proposed development are very tentatively anticipated to be around $60,000,000. Estimates for one-time costs associated with occupancy requirements and annual amounts for operations and maintenance are not available at this time. The proposal for development of the South Quadrangle will be supported by a financial plan designed to make the best use of appropriate and available non-appropriated Trust income and other private support, and to reduce the overall requirement for Federal appropriations wherever possible. This could include, among other things, provision for the sale of Museum of African Art real property to be applied against the construction cost of the east building; private donations and other gifts in support of construction of the west building; and application of expected parking revenues, including perhaps those of the National Air and Space Museum garage, to the cost of the parking facility.

TAB D

SOURCE AND APPLICATION OF OPERATING FUNDS

SMITHSONIAN INSTITUTION

OVERALL SOURCES AND APPLICATION OF FUNDS

Appendix E contains a copy of the Institution's financial report to the Congress and the public which shows the Smithsonian's financial position for FY 1978. The following tables and chart represent current projections for following FY 1979 and FY 1980, as compared with those of the previous year.

Schedule 1 (similar to Table 1 of the FY 1978 Financial Report) summarizes the sources and application of all funds of the Institution--Federal appropriations, grants and contracts from Federal agencies and non-appropriated Trust funds, both restricted and unrestricted. The data relates primarily to operating funds (Salaries and Expenses) but also provides information on the other appropriations for Construction, the Special Foreign Currency Program and the Science Information Exchange. Other schedules following this summary schedule provide the clarifying detail and show total funds of all types expended for each of the line items discussed in this Salaries and Expenses appropriation request. Figures for non-appropriated Trust funds for FY 1979 and FY 1980 are those approved by the Regents as the FY 1979 budget and as a tentative projection for FY 1980 submitted to the Office of Management and Budget. It must be emphasized that for both of these years, these estimates for non-appropriated Trust funds are subject to unpredictable changes as a result of important donations to the Institution, fluctuations in visitor attendance affecting restaurant and parking concession fees, and uncertain economic factors affecting the auxiliary activities.

For FY 1980, overall gross operating revenues of the Institution are projected to equal $188 million, while net operating income, after deduction of expenses related to auxiliary activities, is projected at approximately $130 million. A federal appropriation for Salaries and Expenses at the level now being requested ($104,740,000) would amount to 55.6% of the above-mentioned total gross operating revenues, or 80.6% of net operating revenues. Grants and contracts received from Federal agencies are expected to continue at about $11.5 million. The remaining income consists of non-appropriated Trust funds and is derived from gifts, investment income from endowments and current fund balances and, most importantly, from auxiliary activities (magazine and other Associates programs, shops, concession fees and book and record sales) as shown in Schedules 2 and 3 of the Appendix and the FY 1978 Financial Report. It may be noted that while gross revenues of non-appropriated Trust funds are expected to continue to grow as in previous years and to reach $72.1 million in FY 1980, net income, after a drop in FY 1979, is projected to fall even further in FY 1980 to $15.6 million (of which nearly $5 million would be for restricted purposes). This would be about $6.7 million lower than for FY 1978 as a result of both lowered sales expectations for records and books and continued inflationary cost increases adversely affecting auxiliary activities; and a conservative estimate of further restricted purpose gifts, especially as no large restricted purpose bequest is anticipated for FY 1979 or FY 1980 similar to the one received in FY 1978 ($1,200,000).

The intended use of the Federally appropriated funds is explained in detail in the preceding sections of this request. Non-appropriated Trust funds are applied, in part, to the portion of administrative expenditures unrecovered from overhead charges and to a large number of allotments to the bureaus for programmatic efforts. The largest of these is the $2 million per year program initiated in FY 1978 to provide funds for collections acquisitions, research projects and educational outreach programs. Beginning this year, the Board of Regents has approved using an additional $1,020,000 of the Institution's

unrestricted Trust funds for certain programs previously financed with appropriated funds. These programs are the Smithsonian's Visiting Research (Fellowship) Programs, the Fellowship and Visiting Scholars Programs of the Smithsonian Astrophysical Observatory and the Radiation Biology Laboratory; and the Trust fund share of rental costs for administrative units in L'Enfant Plaza and rental payments by auxiliary activities (calculated by using equivalent rental charges at L'Enfant Plaza). Finally, assuming that actual results for FY 1980 are as good or better than now projected, there still should be sufficient surplus to allow a continuing transfer of approximately $2 million to Smithsonian endowment funds to provide income for the rising costs of future years.

All projections are closely monitored throughout the year with adjustments to projections as dictated by actual results.

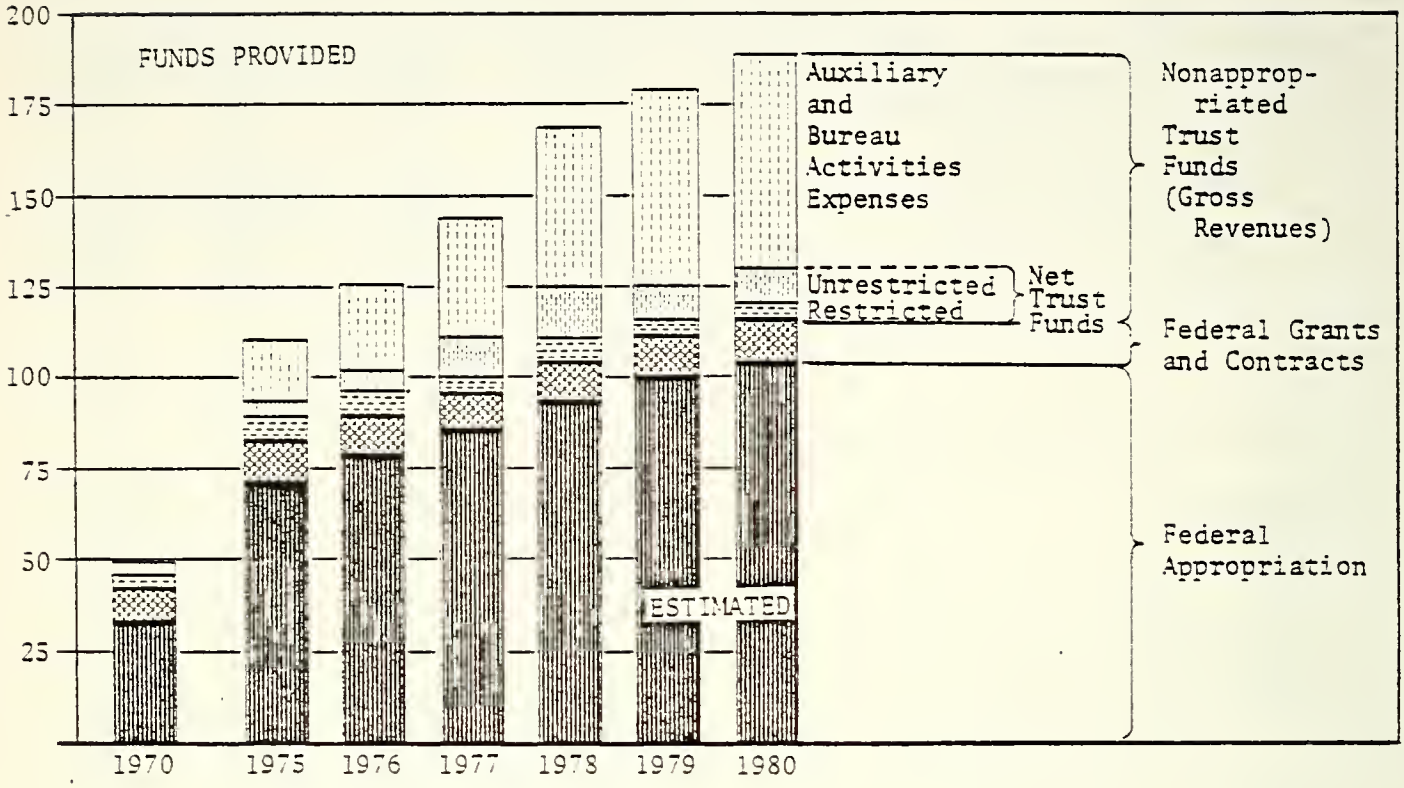
Smithsonian Institution Financial Summary FY 1977 - 1980 Schedule 1

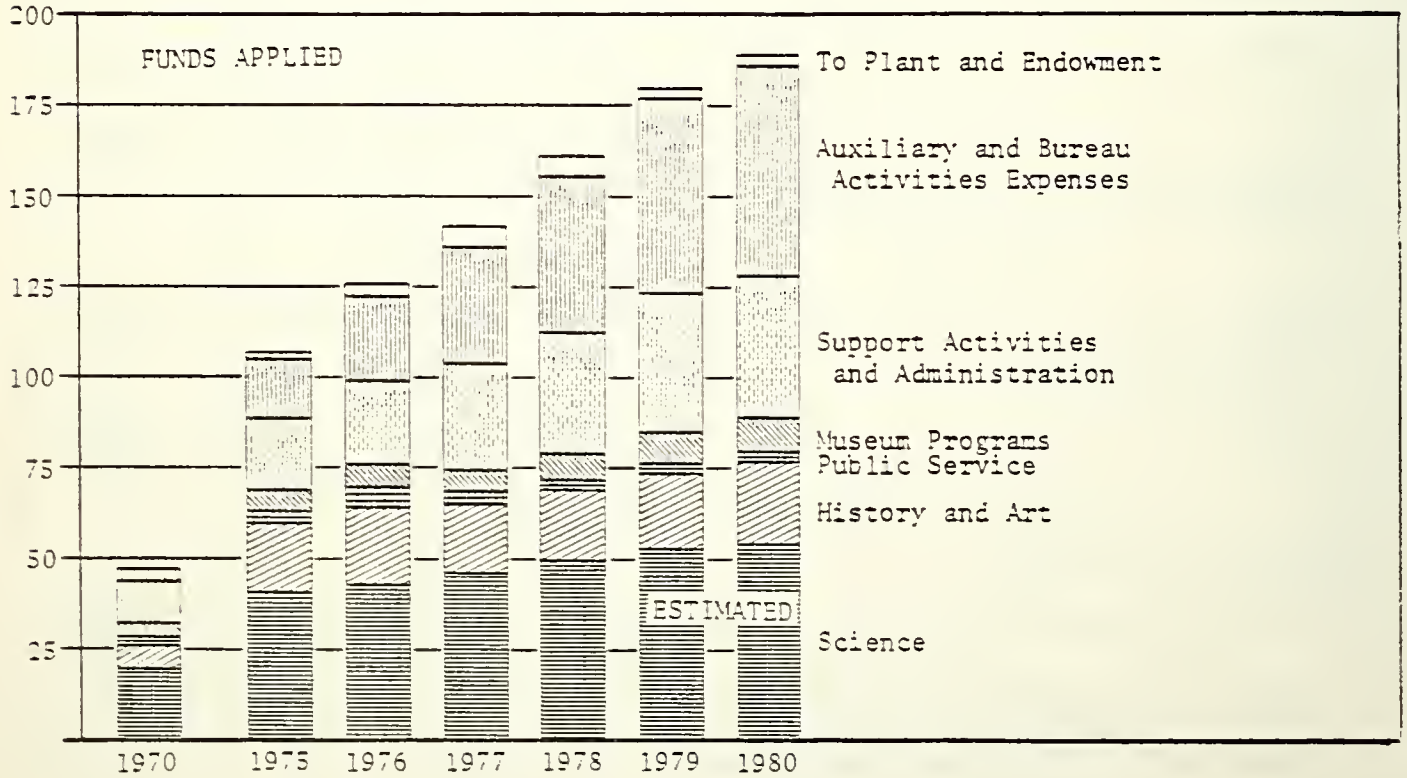
($1,000's)	FY 1977	FY 1978	Budget FY 1979	Projected FY 1980
Institutional Operating Funds				
FUNDS PROVIDED:				
Federal Appropriations - Salary & Expenses	$ 85,236	$ 93,393	$ 98,968	$104,740
Federal Agency Grants & Contracts	10,515	11,157	11,888	11,500
Non-Appropriated Trust Funds:				
For Restricted Purposes	4,407	6,538	4,390	4,880
For Unrestricted & Special Purposes:				
Auxiliary & Bur. Acts. Revenues-Gross	41,923	55,201	61,226	64,807
Less Related Expenses	(32,838)	(43,570)	(53,586)	(58,408)
Auxiliary & Bur. Acts. Net Income	9,085	11,631	7,640	6,399
Other Unrest. & Special Purp. Income	1,637	2,229	2,183	2,369
Total Net Unrest. & Spec. Purp. Income	10,722	13,860	9,823	8,768
Total Non-Approp. Trust Funds* - Gross	47,967	63,968	67,799	72,056
- Net	15,129	20,398	14,213	13,648
Total Operating Funds Provided - Gross	143,718	168,518	178,655	188,296
- Net	$110,880	$124,948	$125,069	$129,888
FUNDS APPLIED:				
Science	45,677	49,744	53,074	54,389
History & Art	18,688	19,620	20,961	22,620
Public Service	2,807	2,576	2,881	2,733
Museum Programs	6,820	7,454	8,706	9,066
Coll. Acquis., Research, Outreach	-0-	-0- **	3,200	2,200
Support Activities	22,523	26,175	26,817	28,531
Administration - Federal	5,644	6,161	7,170	7,724
-Non-Appropriated Trust Funds	5,373	5,875	6,944	7,204
-Less Overhead Recovery	(4,592)	(5,200)	(6,025)	(6,504)
Total Operating Funds Applied	102,940	112,405	123,728	127,963
Transfers (Non-Approp. Trust Funds)				
Unrestricted Funds - To Plant	559	869	211	60
- To Endowments	5,521	3,271	2,100	2,100
Restricted Funds - To Endowments	171	1,261	200	200
Total Operating Funds Applied & Trans. Out	$109,191	$117,806	$126,239	$130,323
CHANGES IN NON-APPROP. TRUST FUND BALANCES:				
Restricted Purpose (Incl.Fed.Agency Gr.& Cont.)	(194)	980	(517)	(526)
Unrestricted - General Purpose	8	850	30	57
- Special Purpose	1,875	5,312	(683)	34
Total	$ 1,689	$ 7,142	$ (1,170)	$ (435)
YEAR-END BALANCES - NON-APPROP. TRUST FUNDS:				
Restricted Purpose	3,560	4,540	4,023	3,497
Unrestricted - General	4,082	4,932	4,962	5,019
-Special	4,292	9,604	8,921	8,955
Total	$ 11,934	$ 19,076	$ 17,906	$ 17,471
OTHER FEDERAL APPROPRIATIONS				
Smithsonian Science Information Exchange	1,972	1,857	2,084	-
Foreign Currency Program	3,481	4,000	3,700	7,700
Construction	9,530	5,250	6,875	32,550
Total Federal Appropriations (Incl.S&E above)	$100,219	$104,500	$111,82[illegible]	$144,990

*Figures do not include gifts and other income directly to Plant and Endowment Funds: FY 1977 - $239,000; FY 1978 - $185,000.

**Expenditures in FY 1978 shown under appropriate program category.

SMITHSONIAN INSTITUTION
OPERATING FUNDS
Fiscal Years 1970 and 1975-1980
(In $1,000,000's)





($1,000's)

Source and Application of Operating Funds
Budget FY 1979

	Total All Funds		Federal Appropriation		Unrestricted Trust Funds General*		Unrestricted Trust Funds Spec. Purpose		Restricted Trust Funds		Federal Grants and Contracts	
FUNDS PROVIDED	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$
Federal Appropriation	--	98,968	--	98,968	--	--	--	--	--	--	--	--
Investment /1	--	3,788	--	--	--	1,650	--	164	--	1,974	--	--
Gifts, Grants and Contracts	--	13,462	--	--	--	85	--	60	--	1,429	--	11,888
Auxiliary Activities Revenues												
Associates - Magazine	--	29,825	--	--	--	29,825	--	--	--	--	--	--
- Other	--	8,022	--	--	--	8,022	--	--	--	--	--	--
Museum Shops/Mail Order/Prod. Dev.	--	12,399	--	--	--	12,399	--	--	--	--	--	--
Concessions	--	1,681	--	--	--	1,681	--	--	--	--	--	--
Other Auxiliary Activities	--	8,059	--	--	--	8,059	--	--	--	--	--	--
Total Auxiliary Activities	--	59,986	--	--	--	59,986	--	--	--	--	--	--
Bureau Activities	--	1,240	--	--	--	--	--	1,240	--	--	--	--
Miscellaneous	--	1,211	--	--	--	15	--	209	--	987	--	--
Total Income		178,655	--	98,968	--	61,736	--	1,673	--	4,390	--	11,888
Less Expenses: Auxiliary Activities												
Associates - Magazine	70	24,005	--	--	70	24,005	--	--	--	--	--	--
- Other	65	8,522	--	--	65	8,522	--	--	--	--	--	--
Museum Shops/Mail Order/Prod. Dev.	152	12,039	--	--	152	12,039	--	--	--	--	--	--
Other Auxiliary Activities	78	8,110	--	--	78	8,110	--	--	--	--	--	--
Total Auxiliary Activities	365	52,676	--	--	365	52,676	--	--	--	--	--	--
Bureau Activities	26	910	--	--	--		26	910	--	--	--	--
Net Funds Provided	--	125,069	--	98,968	--	9,060	--	763	--	4,390	--	11,888
FUNDS APPLIED (Net/Act. Expense)												
Science	1,628	53,074	1,292	37,962	92	1,111	4	717	23	1,580	217	11,704
History and Art	721	20,961	648	16,802	21	894	1	325	50	2,792	1	148
Public Service	83	2,881	79	2,116	3	276	--	5	--	107	1	77
Museum Programs	297	8,706	287	8,531	10	244	--	38	--	40	--	44
Other Activities	--	3,227	--	--	--	--	--	3,200	--	--	--	27
Support Activities	920	26,817	910	26,284	10	552	--	(19)	--	--	--	--
Administration (Net)	403	8,062	242	7,170	160	802	--	20	1	70	--	--
Total	4,052	123,728	3,458	98,968	296	3,879	5	4,286	74	4,599	219	12,000
TRANSFERS to (From)												
--Current Funds	--	--	--	--	--	2,940	--	(2,940)	--	--	--	--
--Endowment Funds	--	2,300	--	--	--	2,000	--	100	--	200	--	--
--Plant Funds	--	211	--	--	--	211	--	--	--	--	--	-
FUND BALANCE - Beginning of Year	--	19,076	--	--	--	4,932	--	9,604	--	4,428	--	112
CHANGE IN FUND BALANCE	--	(1,170)	--	--	--	30	--	(683)	--	(409)	--	(112)
FUND BALANCE - End of Year	--	17,906	--	--	--	4,962	--	8,921	--	4,023	--	-

/1 Net of Investment Manager's Fees
* Includes unrestricted allotments and auxiliary activities.

Source and Application of Operating Funds
Estimated FY 1980

($1,000's)

	Total All Funds		Federal Appropriation		Unrestricted Trust Funds General*		Unrestricted Trust Funds Spec. Purpose		Restricted Trust Funds		Federal Grants and Contracts	
FUNDS PROVIDED	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$
Federal Appropriation	--	104,740	--	104,740	--	--	--	--	--	--	--	--
Investment /1	--	3,994	--	--	--	1,800	--	174	--	2,020	--	--
Gifts, Grants and Contracts	--	13,014	--	--	--	85	--	63	--	1,366	--	11,500
Auxiliary Activities Revenues												
Associates - Magazine	--	31,617	--	--	--	31,617	--	--	--	--	--	--
- Other	--	8,804	--	--	--	8,804	--	--	--	--	--	--
Museum Shops/Mail Order/Prod. Dev.	--	13,819	--	--	--	13,819	--	--	--	--	--	--
Concessions	--	1,783	--	--	--	1,783	--	--	--	--	--	--
Other Auxiliary Activities	--	7,781	--	--	--	7,781	--	--	--	--	--	--
Total Auxiliary Activities	--	63,804	--	--	--	63,804	--	--	--	--	--	--
Bureau Activities	--	1,003	--	--	--	--	--	1,003	--	--	--	--
Miscellaneous	--	1,741	--	--	--	15	--	232	--	1,494	--	--
Total Income	--	188,296	--	104,740	--	65,704	--	1,472	--	4,880	--	11,500
Less Expenses: Auxiliary Activities												
Associates - Magazine	70	26,417	--	--	70	26,417	--	--	--	--	--	--
- Other	65	9,322	--	--	65	9,322	--	--	--	--	--	--
Museum Shops/Mail Order/Prod. Dev.	152	13,396	--	--	152	13,396	--	--	--	--	--	--
Other Auxiliary Activities	78	8,186	--	--	78	8,186	--	--	--	--	--	--
Total Auxiliary Activities	365	57,321	--	--	365	57,321	--	--	--	--	--	--
Bureau Activities	26	1,087	--	--	--	--	26	1,087	--	--	--	--
Net Funds Provided	--	129,888	--	104,740	--	8,383	--	385	--	4,880	--	11,500
FUNDS APPLIED (Net/Act. Expense)												
Science	,596	54,389	1,298	39,848	79	988	4	522	19	1,626	196	11,405
History and Art	733	22,620	649	17,955	21	817	1	379	61	3,425	1	44
Public Service	83	2,733	79	2,474	4	149	--	16	--	94	--	--
Museum Programs	295	9,066	285	8,787	10	211	--	25	--	32	--	11
Other Activities	--	2,240	--	--	--	--	--	2,200	--	--	--	40
Support Activities	921	28,531	911	27,953	10	566	--	13	--	--	--	
Administration (Net)	415	8,384	252	7,724	163	613	--	18	--	29	--	
Total	4,043	127,963	3,474	104,740	287	3,344	5	3,173	80	5,206	197	11,500
TRANSFERS to (From)												
--Current Funds	--	--	--	--	--	2,922	--	(2,922)	--	--	--	--
--Endowment Funds	--	2,300	--	--	--	2,000	--	100	--	200	--	--
--Plant Funds	--	60	--	--	--	60	--	--	--	--	--	--
FUND BALANCE - Beginning of Year	--	17,906	--	--	--	4,962	--	8,921	--	4,023	--	--
CHANGE IN FUND BALANCE	--	(435)	--	--	--	57	--	34	--	(526)	--	--
FUND BALANCE - End of Year	--	17,471	--	--	--	5,019	--	8,955	--	3,497	--	--

/1 Net of Investment Manager's Fees
* Includes unrestricted allotments and auxiliary activities.

Source and Application of Operating Funds
Budget FY 1979

($1,000's)

SCIENCE	Total All Funds		Federal Appropriation		Unrestricted Trust Funds: General		Unrestricted Trust Funds: Spec. Purpose		Restricted Trust Funds		Federal Grants and Contracts	
	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$
Ass't Sect'y, Science	9	605	7	298	--	47	--	--	--	60	2	200
Nat'l Museum of Natural History	547	14,926/1 (2)	503	13,367	1	34	1	126 /1 (2)	3	384	39	1,015
Smithsonian Astrophysical Obs.	308	16,868	73	4,784	74	2,076	--	9	3	311	158	9,688
(SAO Overhead Recovery)	--	(1,870)	--	--	--	(1,870)	--	--	--	--	--	--
Tropical Research Institute	71	2,001/1 (32)	67	1,801	3	79	--	48 /1 (32)	1	73	--	--
Radiation Biology Laboratory	52	1,926	48	1,755	--	31	--	--	1	32	3	108
Fellowships and Grants	11	685	10	215	1	456	--	--	--	14	--	--
Chesapeake Bay Center	42	1,214	22	692	13	204	--	7	--	11	7	300
Nat'l Air and Space Museum	260	7,341/1 (728)	229	5,741	--	10	24	1,268 /1 (728)	2	79	5	250
Nat'l Zoological Park	330	8,136	324	7,944	--	42	3	28	--	52	3	70
Center for the Study of Man	9	735	7	574	--	2	--	--	2	86	--	73
Research Awards Program	--	397	--	397	--	--	--	--	--	--	--	--
Int'l Environ. Science Program	2	394	2	394	--	--	--	--	--	--	--	--
Fort Pierce	11	478	--	--	--	--	--	--	11	478	--	--
TOTAL SCIENCE	1,652	53,836	1,292	37,962	92	1,111	28	1,479	23	1,580	217	11,704
Less expenses of generating revenue	(24)	(762)/1	--	--	--	--	(24)	(762) /1	--	--	--	--
TOTAL SCIENCE (Net)	1,628	53,074	1,292	37,962	92	1,111	4	717	23	1,580	217	11,704

/1 Expenses covered all or in part from revenues of activity.

($1,000's)

Source and Application of Operating Funds
Estimated FY 1980

SCIENCE	Total All Funds		Federal Appropriation		Unrestricted Trust Funds				Restricted Trust Funds		Federal Grants and Contracts	
					General		Spec. Purpose					
	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$
Ass't Sect'y, Science	10	572	7	302	--	17	--	--	1	53	2	200
Nat'l Museum of Natural History	558	15,951	506	14,266	--	10	1	146	2	374	49	1,155
Smithsonian Astrophysical Obs.	--	16,787	73	4,881	74	2,115	--	4	3	355	127	9,432
(SAO Overhead Recovery)	277	(1,946)	--	--	--	(1,946)	--	--	--	--	--	--
Tropical Research Institute	76	2,465 /1 (34)	72	2,257	3	84	--	49 /1 (34)	1	75	--	--
Radiation Biology Laboratory	52	1,954	49	1,807	--	31	--	--	--	15	3	101
Fellowships and Grants	11	790	10	221	1	556	--	--	--	13	--	--
Chesapeake Bay Center	29	1,077	21	706	1	64	--	7	--	--	7	300
Nat'l Air and Space Museum	257	7,242 /1 (892)	227	5,791	--	15	24	1,212 /1 (892)	1	85	5	139
Nat'l Zoological Park	330	8,381	324	8,177	--	42	3	30	--	54	3	78
Center for the Study of Man	7	705	7	586	--	--	--	--	--	119	--	--
Research Awards Program	--	457	--	457	--	--	--	--	--	--	--	--
Int'l Environ. Science Program	2	397	2	397	--	--	--	--	--	--	--	--
Fort Pierce	11	483	--	--	--	--	--	--	11	483	--	--
TOTAL SCIENCE	1,620	55,315	1,298	39,848	79	988	28	1,448	19	1,626	196	11,405
Less expenses of generating revenue	(24)	(926) /1	--	--	--	--	(24)	(926) /1	--	--	--	--
TOTAL SCIENCE (Net)	1,596	54,389	1,298	39,848	79	988	4	522	19	1,626	196	11,405

/1 Expenses covered all or in part from revenues of activity.

($1,000's)

Source and Application of Operating Funds
Budget FY 1979

HISTORY AND ART	Total All Funds		Federal Appropriation		Unrestricted Trust Funds General		Unrestricted Trust Funds Spec. Purpose		Restricted Trust Funds		Federal Grants and Contracts	
	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$
Ass't Sect'y History and Art	5	222	4	139	1	63	--	20	--	--	--	--
-- Joseph Henry Papers	6	168	5	149	--	--	--	--	--	1	1	18
Nat'l Museum History & Tech.	275	7,293/1 (10)	274	6,683	--	36	1	200 /1 (10)	--	349	--	25
Nat'l Collection of Fine Arts	106	3,328	106	3,098	--	67	--	78	--	85	--	--
Nat'l Portrait Gallery	80	2,483	78	2,289	--	78	--	20	2	96	--	--
Hirshhorn Museum	80	2,287	80	2,116	--	50	--	13	--	108	--	--
Freer Gallery of Art	50	1,673	30	603	--	--	--	--	20	1,070	--	--
Archives of American Art	30	742	17	473	--	--	--	--	13	269	--	--
Cooper-Hewitt Museum	45	1,687	20	543	12	300	--	--	13	783	--	61
Museum of African Art	30	350	30	350	--	--	--	--	--	--	--	--
American & Folklife Studies	14	738	4	359	8	300	--	4	2	31	--	44
TOTAL HISTORY AND ART	721	20,971	648	16,802	21	894	1	335	50	2,792	1	148
Less expenses of generating revenue	--	(10)/1	--	--	--	--	--	(10) /1	--	--	--	--
TOTAL HISTORY AND ART (Net)	721	20,961	648	16,802	21	894	1	325	50	2,792	1	148

/1 Expenses covered all or in part from revenue of activity.

Source and Application of Operating Funds
Estimated FY 1980

($1,000's)

HISTORY AND ART	Total All Funds		Federal Appropriation		Unrestricted Trust Funds: General		Unrestricted Trust Funds: Spec. Purpose		Restricted Trust Funds		Federal Grants and Contracts	
	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$
Ass't Sect'y History and Art	5	209	4	145	1	63	--	1	--	--	--	--
-- Joseph Henry Papers	6	178	5	158	--	--	--	--	--	1	1	19
Nat'l Museum History & Tech.	280	7,589 /1 (9)	278	6,984	--	12	1	232 (9) /1	1	336	--	25
Nat'l Collection of Fine Arts	105	3,339	105	3,210	--	26	--	61	--	42	--	--
Nat'l Portrait Gallery	78	2,469	76	2,345	--	21	--	15	2	88	--	--
Hirshhorn Museum	80	2,614	80	2,184	--	23	--	57	--	350	--	--
Freer Gallery of Art	51	1,724	29	626	--	--	--	--	22	1,098	--	--
Archives of American Art	30	772	17	519	--	--	--	--	13	253	--	--
Cooper-Hewitt Museum	46	1,800	21	623	12	320	--	--	13	857	--	--
Museum of African Art	40	1,050	30	700	--	--	--	--	10	350	--	--
American & Folklife Studies	12	885	4	461	8	352	--	22	--	50	--	--
TOTAL HISTORY AND ART	733	22,629	649	17,955	21	817	1	388	61	3,425	1	44
Less expenses of generating revenue	--	(9) /1	--	--	--	--	--	(9) /1	--	--	--	--
TOTAL HISTORY AND ART (Net)	733	22,620	649	17,955	21	817	1	379	61	3,425	1	44

/1 Expenses covered all or in part from revenue of activity.

Source and Application of Operating Funds
Budget FY 1979

($1,000's)

PUBLIC SERVICE	Total All Funds F/T Empl.	Total All Funds $	Federal Appropriation F/T Empl.	Federal Appropriation $	Unrestricted Trust Funds General* F/T Empl.	Unrestricted Trust Funds General* $	Unrestricted Trust Funds Spec. Purpose F/T Empl.	Unrestricted Trust Funds Spec. Purpose $	Restricted Trust Funds F/T Empl.	Restricted Trust Funds $	Federal Grants and Contracts F/T Empl.	Federal Grants and Contracts $
Ass't Sect'y, Public Service	8	235	7	198	1	37	--	--	--	--	--	--
-- Ofc. of Telecommunications	9	356 (311) /1	2	42	7	311/1 (311)	--	--	--	3	--	--
Anacostia Neighborhood Museum	20	737	19	639	1	22	--	2	--	74	--	--
International Exchange Service	5	216	5	216	--	--	--	--	--	--	--	--
Division of Performing Art	24	2,656 /1 (2,090)	9	320	14	2,229/1 (2,090)	--	--	--	30	1	77
Smithsonian Institution Press	32	1,398 /1 (629)	28	769	4	629/1 (629)	--	--	--	--	--	--
Office of Symposia & Seminars	4	142	3	61	1	78	--	3	--	--	--	--
Office of Elementary and Secondary Education	6	171	6	171	--	--	--	--	--	--	--	--
TOTAL PUBLIC SERVICE	108	5,911	79	2,416	28	3,306	--	5	--	107	1	77
Less expenses of generating revenue	(25)	/1 (3,030)	--	--	(25)	/1 (3,030)	--	--	--	--	--	--
TOTAL PUBLIC SERVICE (Net)	83	2,881	79	2,416	3	276	--	5	--	107	1	77

/1 Expenses covered all or in part from revenue of activity.

*Includes unrestricted allotments and auxiliary activities.

($1,000's)

Source and Application of Operating Funds
Estimated FY 1980

PUBLIC SERVICE	Total All Funds		Federal Appropriation		Unrestricted Trust Funds General *		Unrestricted Trust Funds Spec. Purpose		Restricted Trust Funds		Federal Grants and Contracts	
	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$
Ass't Sect'y, Public Service	9	250	7	209	2	41	--	--	--	--	--	--
-- Ofc. of Telecommunications	9	411/1 (359)	2	48	7	359/1 (359)	--	--	--	4	--	--
Anacostia Neighborhood Museum	20	669	19	631	1	25	--	13	--	--	--	--
International Exchange Service	5	217	5	217	--	--	--	--	--	--	--	--
Division of Performing Art	23	2,542/1 (2,125)	9	327	14	2,125/1 (2,125)	--	--	--	90	--	--
Smithsonian Institution Press	32	1,483/1 (692)	28	791	4	692/1 (692)	--	--	--	--	--	--
Office of Symposia & Seminars	4	153	3	67	1	83	--	3	--	--	--	--
Office of Elementary and Secondary Education	6	184	6	184	--	--	--	--	--	--	--	--
TOTAL PUBLIC SERVICE	108	5,909	79	2,474	29	3,325	--	16	--	94	--	--
Less expenses of generating revenue	(25)	/1 (3,176)	--	--	(25)	/1 (3,176)	--	--	--	--	--	--
TOTAL PUBLIC SERVICE (Net)	83	2,733	79	2,474	4	149	--	16	--	94	--	--

/1 Expenses covered all or in part from revenue of activity.

*Includes unrestricted allotments and auxiliary activities.

($1,000's)

Source and Application of Operating Funds
Budget FY 1979

MUSEUM PROGRAMS	Total All Funds		Federal Appropriation		Unrestricted Trust Funds General *		Unrestricted Trust Funds Spec. Purpose		Restricted Trust Funds		Federal Grants and Contracts	
	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$
Ass't Sect'y Museum Programs	7	268	7	253	--	6	--	--	--	9	--	--
-- Office of Museum Programs	12	326 (19) /1	12	298	--	--	--	19 /1 (19)	--	9	--	--
-- Office of Horticulture	30	786 /1 (2)	30	741	--	25	--	19 /1 (2)	--	1	--	--
-- South Group Buildings Mgmt.	42	684	42	684	--	--	--	--	--	--	--	--
-- International Activities	5	142	5	142	--	--	--	--	--	--	--	--
Office of the Registrar	4	109	4	109	--	--	--	--	--	--	--	--
Conservation-Analytical Laboratory	23	719	23	719	--	--	--	--	--	--	--	--
Smithsonian Inst. Libraries	104	2,634	95	2,455	9	178	--	--	--	1	--	--
Office of Exhibits Central	47	1,228	47	1,181	--	--	--	21	--	26	--	--
Traveling Exhibition Service	20	787 (595) /1	6	148	14	595 (595) /1	--	--	--	--	--	44
Smithsonian Archives	14	342	13	307	1	35	--	--	--	--	--	--
National Museum Act	3	797	3	797	--	--	--	--	--	--	--	--
Collections Management/Inventory	--	500	--	500	--	--	--	--	--	--	--	--
TOTAL MUSEUM PROGRAMS	311	9,322	287	8,334	24	839	--	59	--	46	--	44
Less expenses of generating revenue	(14)	(616) /1	--	--	(14)	(595) /1	--	(21) /1	--	--	--	--
TOTAL MUSEUM PROGRAMS (Net)	297	8,706	287	8,334	10	244	--	38	--	46	--	44

/1 Expenses covered all or in part from revenue of activity.

*Includes unrestricted allotments and auxiliary activities.

Source and Application of Operating Funds
Estimated FY 1980

($1,00's)

MUSEUM PROGRAMS	Total All Funds F/T Empl.	Total All Funds $	Federal Appropriation F/T Empl.	Federal Appropriation $	Unrestricted Trust Funds General * F/T Empl.	Unrestricted Trust Funds General * $	Unrestricted Trust Funds Spec. Purpose F/T Empl.	Unrestricted Trust Funds Spec. Purpose $	Restricted Trust Funds F/T Empl.	Restricted Trust Funds $	Federal Grants and Contracts F/T Empl.	Federal Grants and Contracts $
Ass't Sect'y Museum Programs	7	268	7	261	--	7	--	--	--	--	--	--
-- Office of Museum Programs	12	329 /1 (21)	12	308	--	--	--	21 (21) /1	--	--	--	--
-- Office of Horticulture	29	922 /1 (4)	29	899	--	--	--	23 /1 (4)	--	--	--	--
-- South Group Buildings Mgmt.	40	722	40	722	--	--	--	--	--	--	--	--
-- International Activities	5	146	5	146	--	--	--	--	--	--	--	--
Office of the Registrar	4	110	4	110	--	--	--	--	--	--	--	--
Conservation-Analytical Laboratory	23	764	23	764	--	--	--	--	--	--	--	--
Smithsonian Inst. Libraries	105	2,764	96	2,594	9	168	--	--	--	2	--	--
Office of Exhibits Central	47	1,235	47	1,199	--	--	--	6	--	30	--	--
Traveling Exhibition Service	20	847 /1 (684)	6	152	14	684 /1 (684)	--	--	--	--	--	11
Smithsonian Archives	14	370	13	334	1	36	--	--	--	--	--	--
National Museum Act	3	798	3	798	--	--	--	--	--	--	--	--
Collections Management/Inventory	--	500	--	500	--	--	--	--	--	--	--	--
TOTAL MUSEUM PROGRAMS	309	9,775	285	8,787	24	895	--	50	--	32	--	11
Less expenses of generating revenue	(14)	(709) /1	--	--	(14)	(684) /1	--	(25) /1	--	--	--	--
TOTAL MUSEUM PROGRAMS (Net)	295	9,066	285	8,787	10	211	--	25	--	32	--	11

/1 Expenses covered all or in part from revenue of activity.

*Includes unrestricted allotments and auxiliary activities.

Source and Application of Operating Funds
Budget FY 1979

($1,000's)

OTHER ACTIVITIES	Total All Funds F/T Empl.	Total All Funds $ /1	Federal Appropriation F/T Empl.	Federal Appropriation $	Unrestricted Trust Funds General * F/T Empl.	Unrestricted Trust Funds General * $ /1	Unrestricted Trust Funds Spec. Purpose F/T Empl.	Unrestricted Trust Funds Spec. Purpose $	Restricted Trust Funds F/T Empl.	Restricted Trust Funds $	Federal Grants and Contracts F/T Empl.	Federal Grants and Contracts $
Associates -- National	25	5,029 (5,029)	--	--	25	5,029 (5,029)	--	--	--	--	--	--
-- Magazine	70	24,005 (24,005)	--	--	70	24,005 (24,005)	--	--	--	--	--	--
-- Resident	37	1,993 (1,993)	--	--	37	1,993 (1,993)	--	--	--	--	--	27
-- Foreign Study Tours	3	1,500 (1,500)	--	--	3	1,500 (1,500)	--	--	--	--	--	--
Business Management -- Museum Shops	101	6,649 (6,649)	--	--	101	6,649 (6,649)	--	--	--	--	--	--
-- Mail Order	50	5,172 (5,172)	--	--	50	5,172 (5,172)	--	--	--	--	--	--
-- Belmont	8	399 (399)	--	--	8	399 (399)	--	--	--	--	--	--
-- Other Business Management	6	359 (359)	--	--	6	359 (359)	--	--	--	--	--	--
Smithsonian Exposition Books	12	3,410 (3,410)	--	--	12	3,410 (3,410)	--	--	--	--	--	--
Allot. For Research Coll. Acqt., Public Outreach & Fluid Research	--	3,200	--	--	--	--	--	3,200	--	--	--	--
TOTAL OTHER ACTIVITIES	312	51,716	--	--	312	48,516	--	3,200	--	--	--	27
Less expenses of generating revenue	(312)	(48,516)	--	--	(312)	(48,516)	--	--	--	--	--	--
TOTAL OTHER ACTIVITIES (Net)	--	3,227	--	--	--	--	--	3,200	--	--	--	27

/1 Expenses covered all or in part from revenue of activity.

*Includes auxiliary activities only.

($1,000's)

Source and Application of Operating Funds
Estimated FY 1980

OTHER ACTIVITIES	Total All Funds		Federal Appropriation		Unrestricted Trust Funds General *		Unrestricted Trust Funds Spec. Purpose		Restricted Trust Funds		Federal Grants and Contracts	
	F/T Empl.	$ /1	F/T Empl.	$	F/T Empl.	$ /1	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$
Associates -- National	25	5,585 (5,585)	--	--	25	5,585 (5,585)	--	--	--	--	--	--
-- Magazine	70	26,417 (26,417)	--	--	70	26,417 (26,417)	--	--	--	--	--	--
-- Resident	37	2,232 (2,232)	--	--	37	2,232 (2,232)	--	--	--	--	--	40
-- Foreign Study Tours	3	1,505 (1,505)	--	--	3	1,505 (1,505)	--	--	--	--	--	--
Business Management -- MuseumShops	101	7,098 (7,098)	--	--	101	7,098 (7,098)	--	--	--	--	--	--
-- Mail Order	50	6,059 (6,059)	--	--	50	6,059 (6,059)	--	--	--	--	--	--
-- Belmont	8	367 (367)	--	--	8	367 (367)	--	--	--	--	--	--
-- Other Business Management	6	395 (395)	--	--	6	395 (395)	--	--	--	--	--	--
Smithsonian Exposition Books	12	(3,177 (3,177)	--	--	12	3,177 (3,177)	--	--	--	--	--	--
Allot. For Research Coll. Acqt., Public Outreach & Fluid Research	--	2,240	--	--	--	--	--	2,200	--	--	--	40
TOTAL OTHER ACTIVITIES	312	55,075	--	--	312	(52,835	--	2,200	--	--	--	--
Less expenses of generating revenue	(312)	52,835	--	--	312)	(52,835)	--	--	--	--	--	--
TOTAL OTHER ACTIVITIES (Net)	--	2,240	--	--	--	--	--	2,200	--	--	--	40

/1 Expenses covered all or in part from revenue of activity.

*Includes auxiliary activities only.

Source and Application of Operating Funds

($1,000's) Budget FY 1979

	Total All Funds		Federal Appropriation		Unrestricted Trust Funds General*		Unrestricted Trust Funds Spec. Purpose		Restricted Trust Funds		Federal Grants and Contracts	
SUPPORT ACTIVITIES	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$
-- Printing & Photographic Services	58	1,586 /1 (535)	39	982	19	604/1 (535)	--	--	--	--	--	--
-- Protection Services	549	9,292	549	9,311	--	--	--	(19)	--	--	--	--
-- Office of Plant Services	329	(81)/1 16,555	322	15,991	5	483	2	81 (81)/1	--	--	--	--
TOTAL SUPPORT ACTIVITIES	936	27,433	910	26,284	24	1,087	2	62	--	--	--	--
Less expenses of generating revenue -	(16)	/1 (616)	--	--	(14)	/1 (535)	(2)	/1 (81)	--	--	--	--
TOTAL SUPPORT ACTIVITIES (Net)	920	26,817	910	26,284	10	552	--	(19)	--	--	--	--
ADMINISTRATION	403	12,253 (36)/1	242	7,170	160	4,957	--	56 (36)/1	1	70	--	--
Less overhead recovery	--	(4,155)	--	--	--	/2 (4,155)	--	--	--	--	--	--
ADMINISTRATION (Net)	403	8,062	242	7,170	160	802	--	20	1	70	--	--
GRAND TOTAL APPLIED	1,052	123,728	3,458	98,968	296	3,879	5	1,286	74	1,595	219	12,000

/1 Expenses covered all or in part from revenue of activity.

/2 See Astrophysical Observatory under Science for Balance of overhead recovery.

* Includes unrestricted allotments and auxiliary activities.

$1,00's)

Source and Application of Operating Funds
Estimated FY 1980

SUPPORT ACTIVITIES	Total All Funds		Federal Appropriation		Unrestricted Trust Funds General*		Unrestricted Trust Funds Spec. Purpose		Restricted Trust Funds		Federal Grants and Contracts	
	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$	F/T Empl.	$
-- Printing & Photographic Services	60	1,766 626/1	41	1,066	19	700 /1 (626)	--	--	--	--	--	--
-- Protection Services	549	9,708	549	9,695	--	--	--	13	--	--	--	--
-- Office of Plant Services	328	17,768/1 (85)	321	17,191	5	492	2	85 /1 (85)	--	--	--	--
TOTAL SUPPORT ACTIVITIES	937	29,242	911	27,952	24	1,192	2	98	--	--	--	--
Less expenses of generating revenue	(16)	(711)	--	--	(14)	(626)	(2)	(85)	--	--	--	--
TOTAL SUPPORT ACTIVITIES (Net)	921	28,531	911	27,952	10	566	--	13	--	--	--	--
ADMINISTRATION	415	12,884 (42)	252	7,724	163	5,071	--	60 /1 (42)	--	29	--	--
Less overhead recovery	--	(4,458)	--	--	--	(4,458)*	--	--	--	--	--	--
ADMINISTRATION (Net)	415	8,384	252	7,724	163	613	--	18	--	29	--	--
GRAND TOTAL APPLIED	1,043	127,963	3474	104,740	287	3,344	5	3,173	80	5,206	197	11,500

/1 Expenses covered all or in part from revenue of activity.

/2 See Astrophysical Observatory under Science for Balance of overhead recovery.

* Includes unrestricted allotments and auxiliary activities.

TAB E

APPENDIX

SMITHSONIAN INSTITUTION
"Salaries and Expenses"

Report of Appropriation by Objects of Expense
(In thousands of dollars)

	1978 Actual	1979 Base	1980 Estimate	Increase 1980 over 1979
11 Personnel Compensation.....	59,473	66,533	69,385	2,852
12 Personnel Benefits.....	5,800	6,828	7,168	340
21 Travel & Transportation of Persons.....	531	809	886	77
22 Transportation of Things.....	350	387	408	21
23 Rent, Communications and Utilities.....	10,037	9,858	10,684	826
24 Printing and Reproduction.....	1,002	1,055	1,125	70
25 Other Services.....	6,065	6,103	6,333	230
26 Supplies and Materials.....	5,150	4,052	4,642	590
31 Equipment.....	2,640	2,033	2,537	504
Acquisitions for Collections....	848	827	827	-0-
32 Land and Structures.....	43	-0-	-0-	-0-
41 Grants.....	1,337	734	734	-0-
42 Insurance Claims and Indemnities.....	5	8	11	3
TOTAL.....	93,281	99,227/1	104,740	5,513

/1 Includes base supplemental requests of $3,945 thousand which is offset by a permanent reduction of $1,020 thousand.

SMITHSONIAN VISITORS
(By Fiscal Year)

Fiscal Year	Smithsonian Institution Building	Arts and Industries Building	Museum of Natural History	National Air & Space Building	Freer Gallery of Art	Museum of History & Technology/1	Fine Arts & Portrait Galleries/2	Renwick Gallery/3	Hirshhorn Museum & Sculpture Garden/4	Total/5
1961	1,024,526	2,912,371	2,047,973	987,858	130,746					7,103,474
1962	1,222,112	3,471,050	2,113,053	1,986,319	130,597					8,923,131
1963	1,630,280	3,534,182	2,288,397	2,673,618	183,359					10,309,836
1964	1,311,061	2,457,243	2,512,306	1,854,186	168,625	2,509,774				10,813,195
1965	1,065,635	2,028,175	3,051,472	1,705,683	210,972	5,091,776				13,153,713/6
1966	870,010	1,746,715	2,988,006	1,494,922	222,089	4,829,112				12,150,854
1967	1,020,312	1,638,873	3,409,957	1,484,422	212,920	5,546,102				13,312,586
1968	847,176	1,344,622	3,257,957	1,123,698	169,533	4,750,023	30,888			11,523,897/8
1969	275,259/7	1,493,141	2,916,749	1,225,959	179,374	4,174,071	166,177			10,430,730/9
1970	/7	2,557,155	3,269,791	1,839,373	217,305	5,483,555	216,523			13,583,702
1971	681,255	1,985,732	3,456,755	1,337,445	190,425	5,955,128	194,468			13,801,208
1972	819,617	2,306,071	3,414,640	1,104,151	230,475	6,808,526	246,657	105,186		15,035,323
1973	807,294	2,285,603	3,306,105	1,223,917	204,858	6,905,339	254,005	165,846		15,152,967
1974	739,651	2,040,731	3,067,694	1,285,598	219,346	5,850,227	329,487	175,672		13,708,406
1975	967,164	1,973,356	3,668,587	1,416,432	215,061	7,111,054	368,948	165,433	1,620,540	17,506,575
1976	1,033,803	592,400/10	4,342,601	1,451,049/11	225,257	6,318,964	465,231	222,351	1,587,628	16,239,284
T.Q.	291,808	543,007	1,535,613	3,062,254/11	59,217	1,470,708	112,682	46,661	434,415	7,556,365
1977	755,146	1,223,703	4,925,741	9,886,350	214,675	4,307,020	399,364	155,792	1,342,892	23,210,683
1978	757,485	903,081	5,366,159	10,028,888	244,493	4,050,687	480,947	201,284	1,299,134	23,332,158

/1 Museum of History and Technology opened January 1964.
/2 National Collection of Fine Arts opened May 1968 and National Portrait Gallery in October 1968.
/3 Renwick Gallery opened January 1972.
/4 Hirshhorn Museum and Sculpture Garden opened October 1974.
/5 An additional 3,000,000 visitors to the National Zoological Park annually, 40,000 to the Anacostia Museum, and 120,000 to the Cooper-Hewitt Museum in New York are excluded from these totals.
/6 July-August 1964, certain Smithsonian Institution buildings were open 4:30 to 10 p.m. for the first time.
/7 Building closed for renovation October 1968.
/8 Reflects the significant decrease in visitors in the Nation's Capital in the first six months of CY 1968 due to unsettled local conditions.
/9 Fiscal year 1969 visitor totals represent the effect of local conditions in late 1968 on visitor attendance.
/10 Building closed for installation of "1876" exhibition September, 1975 through April, 1976.
/11 Old building closed November, 1975. Foyer of new museum opened to visitors February, 1976. New building completely opened July 1, 1976.

SMITHSONIAN INSTITUTION - 1978

FINANCIAL REPORT

T. AMES WHEELER, TREASURER

SUMMARY

In reviewing Smithsonian's financial progress for fiscal year 1978, note should be taken of important matters which have received much attention from financial and other management personnel over this past year. These dealt with responses to recommendations generated by extensive studies of Institutional operations by the General Accounting Office, the Surveys and Investigation Staff of the House Appropriations Committee and the Smithsonian Board of Regents -- essentially the result of the Institution's increased "visibility" following years of physical and financial growth. All of these studies substantiated the integrity of Smithsonian finances. At the same time they made a number of constructive recommendations to strengthen administrative procedures as outlined in Secretary Ripley's statements in both this year's and last year's annual reports. The resulting Smithsonian responses include expanded efforts to provide more extensive financial information to the Congress, the Regents and the public.

As a part of these efforts some modifications have been made in this financial report. Whereas, it has been the practice in the past to consider federal appropriations separately from non-appropriated trust funds, the Regents, like the Congress, are now emphasizing approval of consolidated budgets which include all types of Institutional funds and clarify the relationships between them. Table 1 in this report, therefore, now sets forth the sources and application of all funds available to the Institution. Other tables in this report, for the most part, provide clarifying detail for this overall summary.

As to the financial results themselves for the fiscal year 1978, they demonstrate the continued strong appreciation and support of the Institution by the Congress and the public as a whole. Federal appropriations totaling $104.5 million overall were expanded sufficiently to furnish protection against inflationary operating cost increases, strengthen maintenance and protection services, and fund a limited number of urgent additional program needs. Construction appropriations were lower than in the previous year but those for the Foreign Currency Program increased.

Results for our non-appropriated trust funds were equally satisfactory, with further increases in income from investments, gifts and bequests, and auxiliary activities. Restricted purpose funds alone supplied over $5.0 million for activities and provided a $1.2 million addition to endowment funds largely dedicated to assistance for Smithsonian scientific publications. The higher level of unrestricted non-appropriated trust funds income made it possible to establish a new $2 million per year program for major collection acquisitions, research and public education, with an extra $2 million reserve set aside this year in further support of such future purchases for collections. In addition, $869,000 of non-appropriated monies were used for construction, equipment and land purchases, and over $3.0 million for a multitude of other bureau and Institution needs, including the inflation-bred rise in administrative costs. Remaining surplus for the year allowed a further prudent addition to endowment funds to guard against possible less satisfactory financial results in future years.

The Board of Regents and the Secretary, in conjunction with Congressional representatives, have now concluded that the Institution should assume in future years, with the use of non-appropriated funds, some program costs previously supported from federal appropriations. Such actions, together with

the substantial amounts of non-appropriated funds already being devoted to Institutional operations, will reduce support needed from U.S. taxpayers and provide strong evidence of the value to the Government itself of the Institution's "self-help" auxiliary activities -- over and above the very real cultural values these activities present for the public.

OPERATING FUNDS - SOURCE AND APPLICATION

As may be seen from Table 1 and the chart on page E-16, total operating revenues of the Institution from all sources increased in FY 1978 to $168.5 million, compared with $143.7 million in the preceding year. Net funds received (i.e., after expenses incurred in generating the revenues of our auxiliary activities) increased by more than $14 million to $124.9 million. These funds are of three principal kinds: federal appropriations (55%), grants and contracts received from federal agencies (7%) and non-appropriated funds from a variety of sources (38%), the percentages shown relating to gross revenues received. While all monies coming to the Institution are dedicated to the same broad objectives of increasing and diffusing knowledge, there are important differences in the specific uses and in the restrictions imposed on these funds. Further detail as to their uses is shown in Table 2.

Federal Appropriation

Of the $14 million increase in net receipts, about two-thirds was accounted for by the $8.2 million rise in the federal appropriation to $93,393,000, equaling 75% of total net operating revenues. Approximately $6.4 million of this increase was required merely for the inflationary rise in salaries and utility rates. The remaining $2.1 million represented additional program support, including provision for higher equipment maintenance costs at the Zoo, expanded computer needs at the Astrophysical Observatory,

a major increase for the programs of the National Anthropological Film Center, and added protection services.

Federal Agency Grants and Contracts

Grants and contracts from federal agencies amounting to $11.2 million (8.9% of net operating revenues) were slightly higher than in the preceding year. These funds contribute importantly to the scientific research efforts of the Institution in areas of special capability. Again, as in preceding years (see Table 3), the Astrophysical Observatory, under numerous contracts with the National Aeronautics and Space Administration, accounted for about three-fourths of the total. Some examples of these projects are: research in medical entomology and cancer in lower animals at the Museum of Natural History, geological studies of the lunar surface at the National Air & Space Museum, studies on the molecular processes of comets at the Astrophysical Observatory, and research on the effects of radiation on plant metabolism at the Radiation Biology Laboratory.

Non-Appropriated Trust Funds

Non-Appropriated trust funds are now the second largest source of operating support. In FY 1978, their gross revenues rose by 33%, and net revenues after costs incurred in the Smithsonian Magazine, museum shops and other auxiliary activities which generate income, including those in some individual bureaux, increased 35% to $20,398,000. This amounted to 16.3% of total net operating revenues compared to 13.6% in FY 1977. These included funds provided for both restricted and unrestricted purposes of the Institution.

Restricted funds income, totaling $6,538,000 in FY 1978, as detailed in Table 4, was received for specific purposes designated by the donors and was derived principally from gifts ($3,478,000) and investment income

($2,022,000); also included was $1,038,000 of income from such diverse activities as the Freer Gallery shop and memberships, museum classes and fund-raising auctions of the Cooper-Hewitt Museum and the Archives of American Art. In FY 1978 we were fortunate to receive a $1.2 million bequest from the estate of Dr. Atherton Seidell, which, as a part of the Institution's restricted purpose endowment funds, will henceforth provide income for the publication of scientific papers. Major shares of restricted purpose endowment investment income are dedicated to the support of the Freer Gallery of Art, research at the Fort Pierce, Florida, Oceanographic Bureau, and other specified areas of science. Important uses of gift funds in the past year, as shown in the Table, include : completion and opening of the Marine Hall in the National Museum of History & Technology, important additions to the mineral collection of the National Museum of Natural History, portrait acquisitions at the National Portrait Gallery, support of research fellowships at numerous bureaux, as well as a great diversity of research and education activities at all levels of Smithsonian operations.

Unrestricted purpose funds include both those for general operating purposes of the Institution and a smaller category designated as Special Purpose Funds. In the latter are included funds handled principally by individual bureaus and derived either from activities of the bureaus themselves or received from shares of income from shops and concessions. Detail on income and application of Special Purpose Funds is set forth in Table 5. As shown therein, a major portion of these funds is generated by the National Air and Space Museum; the largest portion of such revenues and expenditures relate to operation of the NASM theatre and the substantial reduction in revenues this year results from its 50% cut in admission fees in July 1977.

From this source, and a number of other aviation-related auxiliary activities, however, this bureau was able in FY 1978 to transfer $250,000 to endowment funds toward a $900,000 goal of funding a Lindbergh Chair of Aerospace History. NASM also supports from these funds a recently established newsletter on aeronautical subjects. Also included in these Special Purpose Funds are reserves set aside for possible additional magazine expenditures and the unspent portion of FY 1978 commitment toward a new $2.0 million per year program for Collection Acquisitions, Research, and Education, discussed below. In FY 1978 an additional $2,000,000 was also reserved for partial prefunding of commitments toward new collection acquisitions. These added reserves account for the substantial rise in the year-end balance of these funds.

A far larger category of unrestricted purpose non-appropriated trust fund income is that for General Institutional Purposes, including auxiliary activities, (refer to Tables 2 and 6). Investment income applicable to these funds rose by $246,000 to $1,400,000 as the result of previous years' income-generating transfers to endowment funds plus larger invested current fund balances. More importantly, however, net revenues from auxiliary activities rose this year by $3.2 million to equal $11,166,000. The Smithsonian Associates Program, including the Smithsonian Magazine, continues to account for the major share of this income (see Tables 6 and 7). In FY 1978, however, important increases in income were realized from sales of the first Smithsonian Exposition Books ("The Smithsonian Experience" and "The Magnificent Foragers") and from a major promotion of musical records developed by the Division of Performing Arts. Income from concessions and from museum shops, including the promising new Mail Order Division, continue to provide important contributions.

These general unrestricted funds traditionally support a portion of the Institution's administrative costs, provide income sharing to bureaus for their discretionary uses, make possible a great variety of small but urgent operating or construction allotments, and in a few cases, such as the Cooper-Hewitt Museum, furnish a portion of basic operating support. In more recent years, as described in previous reports, sizeable amounts have also been transferred to endowment funds to provide for future needs. The increase in net revenues occurring in FY 1978 allowed the Board of Regents to establish a new program calling for the expenditure of $2 million per year. Of this, $1 million would be to provide for major acquisitions for collections of the Smithsonian's museums and art galleries; until now only very limited funds have been available for this purpose either from federal appropriations or from non-appropriated funds. The other $1 million per year would consist of two allotments of $500,000 each to provide for special research projects and public education improvements. Procedures approved by the Regents governing the allotment of these funds call for some matching monies from outside sources and for careful selection and reporting of all projects funded in the three categories.

Other applications of general unrestricted funds in fiscal year 1978 included nearly $900,000 for construction improvements and land purchase at the Chesapeake Bay Center and elsewhere. Another $2 million for future collection acquisitions was transferred to Special Purpose Fund reserves, as outlined previously. The transfer to endowment funds to provide income for future needs consisted of $3 million in the current year, compared to $5.5 million in fiscal year 1977.

OTHER OPERATING PROGRAMS

Not included in the general operating funds described above are two other programs, listed at the bottom of Table 1, supported entirely from separate federal appropriations. The Smithsonian Special Foreign Currency Program provides grants to institutions in this country for field research in other countries where "excess" foreign currencies are available. Funding in fiscal year 1978 was increased to $4 million, including $1 million for the fourth and final contribution to the campaign to save the monuments of Nubia. The general areas of research and geographical activities of this program may be seen in Table 8.

The Smithsonian Science Information Exchange also received a $1,857,000 appropriation in FY 1978, slightly lower than in the previous year. This appropriation, together with fees and contract income received from services provided by the Exchange, are normally sufficient to cover operating costs of this organization which has been operated for the benefit of the government as a Smithsonian subsidiary for a number of years. (See also page E-12).

CONSTRUCTION

The federal appropriation of $5,250,000 in fiscal year 1978 for construction projects was smaller than in recent years. As shown in Table 9, however, it provided for continued work on the Master Plan of the National Zoological Park in Rock Creek and for renovation at their Front Royal Conservation and Research Center.

About an equal amount of money was appropriated for continued widespread restoration and renovation projects, including added improvements for handicapped visitors and employees.

An amount of $325,000 was provided for initial planning work for an important new Museum Support Center for storage and research purposes to be located at the Silver Hill facility near Washington. Additional federal monies for completion of the planning are being provided in fiscal year 1979, and it is hoped that construction of this facility, already authorized by the Congress, can be funded in fiscal year 1980. The sum of $869,000 in non-appropriated trust funds was also provided in the past fiscal year toward construction projects. This made possible the completion of a new laboratory building at the Chesapeake Bay Center as well as its continued land purchase payments. Additional funds were either paid, or encumbered by transfer to plant funds, for physical improvements in the area of the Smithsonian Castle and for purchase of a parcel of land surrounded by the present Front Royal holding of the Zoo.

ENDOWMENT AND SIMILAR FUNDS

As of September 30, 1978, the Smithsonian endowment funds had a total market value of $58,097,000 (see Table 10) which included $57,030,000 in the Consolidated Endowment Fund, $1,000,000 on permanent deposit in the U.S. Treasury, and $67,000 of miscellaneous securities. Of this total, 69% are restricted, with income to be used only for the purposes originally specified by the donor. The Consolidated Endowment Fund consists of the Freer Fund, supporting operations of the Freer Gallery of Art, Endowment Fund No. 3, used for oceanographic research at the Fort Pierce Bureau, and a number of smaller restricted and unrestricted funds (detailed in Table 13) which support

a variety of research and museum programs. The market values of the Consolidated Endowment Fund, which is pooled for investment purposes, are shown in Table 11 while Table 12 shows the change over the past year due to transfers, reinvestment of income, gifts, and values in the securities market. Income paid out under the total return policy, which was in addition to managers' and custodial fees, was $2,303,000; this included $167,000 from accumulated capital gains. Gifts and transfers to the Endowment Funds included the transfer to Unrestricted Endowment referred to above ($3,000,000), the creation of the Lindbergh Chair of Aerospace History ($250,000), the restricted gift from Dr. Seidell which the Regents have voted to set aside in Endowment ($1,179,000), and other gifts and reinvestment of income pursuant to terms of gift ($230,000).

The investment management of the Consolidated Endowment Fund is conducted by professional advisory firms under the close supervision of the Investment Policy Committee and the Treasurer, subject to the policy guidelines approved by the Smithsonian's Board of Regents. During the year, after an extensive review by the Committee of investment performance since 1971, the services of two of these firms were terminated, and three new advisors were selected, in addition to the one retained.

A listing of the individual investments held in the Consolidated Endowment Fund as of September 30, 1978, may be obtained upon request to the Treasurer of the Institution.

RELATED ORGANIZATIONS

The Smithsonian Science Information Exchange, Inc., referred to in "Other Operating Programs" above, is a separate non-profit entity incorporated by the Smithsonian in 1971. It receives as an annual contract from the

Smithsonian, the separate appropriation received from Congress for this purpose. Ongoing research information obtained by the Exchange from Government agencies and other sources is catalogued and stored in a computerized data base to permit the answering of thousands of inquiries on these subjects. In return the Exchange also receives substantial revenues from users of its services, totaling about $1,300,000 in fiscal year 1978, to cover service costs. At the request of Congress, the Exchange will now be transferred by fiscal year 1980 to the Department of Commerce, which will thereafter assume responsbility for its program.

As mentioned in the financial report for last year, activities of the Smithsonian Research Foundation have now been terminated and incorporated in the Smithsonian's general administrative offices.

The Institution is continuing to provide administrative services for Reading is Fundamental, Inc., an organization which now operates independently after being associated with the Institution since 1968. This organization, dedicated to improvement of reading abilities in children, has grown very substantially and is now financed not only by private contributions but also by extensive federal support.

The Woodrow Wilson International Center for Scholars, established by Congress "in the Smithsonian Institution" operates in office space and with support services provided by the Institution but is separately administered under its own Board of Trustees. During the past year the Institution assisted the Center in its launching of the new "Woodrow Wilson Quarterly". The funds of the Center, administered by the Smithsonian, are included as part of "Agency Funds" like those of the organizations mentioned above.

The National Gallery of Art and the John F. Kennedy Center for the Performing Arts were established legally as bureaus of the Institution to be administered, however, by separate Boards of Trustees. These organizations, therefore, present their own independent financial reports.

The Friends of the National Zoo (FONZ) is an independent, non-profit corporation working closely with the National Zoological Park under contract with the Smithsonian. It operates a number of beneficial concessions at the Zoo, from which it contributed concession and rental fees amounting to over $115,000 during calendar 1977 (FONZ's fiscal year), as well as important program support for Zoo programs. Financial affairs of this organization are disclosed separately elsewhere in the Smithsonian Year.

BALANCE SHEET

The audit report of the Institution's independent audit firm includes detailed comparative balance sheets for the years 1978 and 1977, shown on page E-33. In accordance with practice governing non-profit organizations, asset and liability accounts for current funds, endowment and similar funds, plant funds and agency funds are set forth in separate sections of this balance sheet.

Current funds, which include both restricted and unrestricted purpose operating funds, present a strong financial picture. The Endowment and Similar Funds, plus the Agency Fund sections of this statement have been referred to at length previously. Plant Funds include only fixed assets representing donations of or for land or buildings, plus non-appropriated funds supplied by the Institution itself for these purposes.

ACCOUNTING AND AUDITING

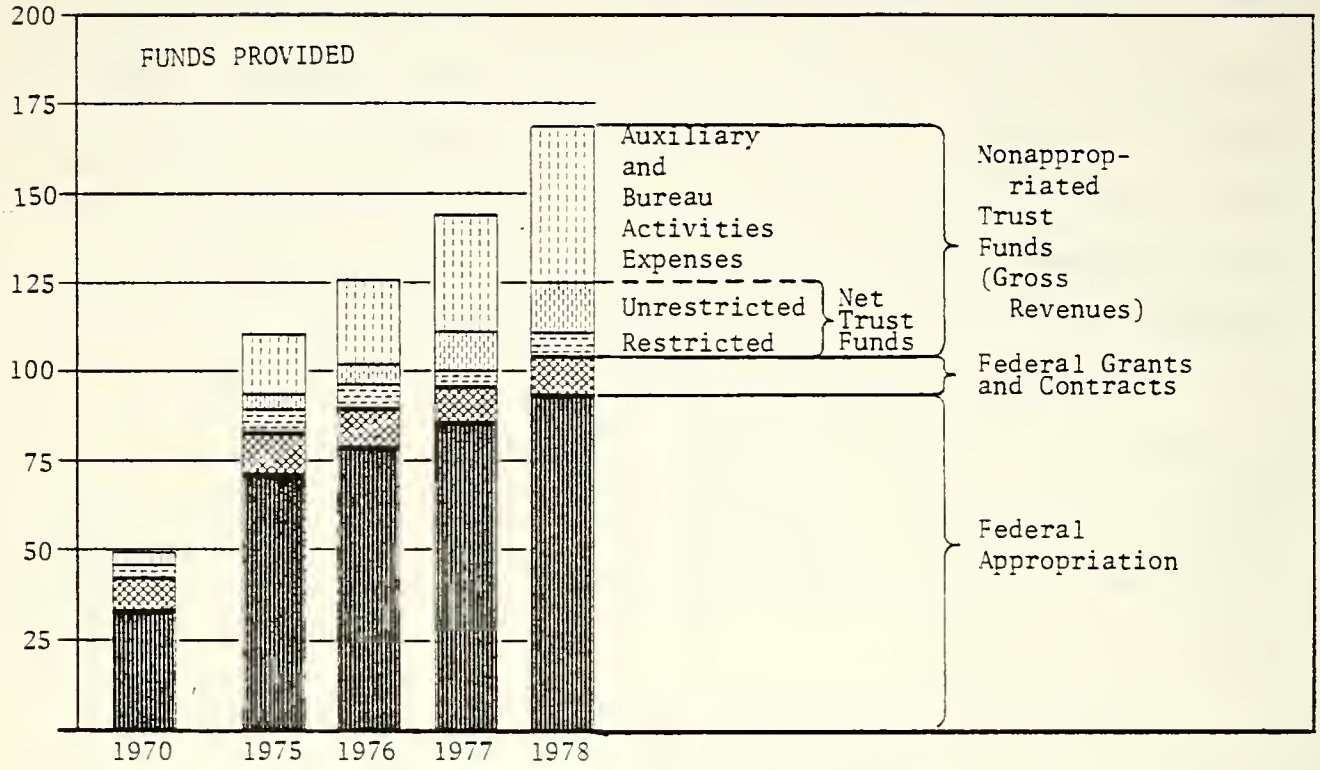
As mentioned last year, efforts have been underway for some time to strengthen the Institution's accounting capability, culminating in fiscal

year 1977 in the installation of a new accounting classification system and increased computerization of accounts, while at the same time, new, enlarged computer equipment was going through a shakedown period. Fortunately, the system was largely completed by the beginning of FY 1978, and new information programs are now beginning to benefit the entire Institution. Such improvements will be continuing for years to come, and with present computer capabilities can produce further substantial benefits.

Some of these benefits have already been useful in responding to recommendations referred to at the beginning of this report, arising from the four important audits of the Institution carried out by external sources in the past two years. Complete resolution of the questions raised is expected within the near future.

During FY 1978 also, the Institution has continued to be subject to the more usual type of audits, namely, those of the internal audit staff, the annual financial review by independent certified public accountants and audits of grants and contracts received from Federal agencies conducted by the Defense Contract Audit Agency.

SMITHSONIAN INSTITUTION
OPERATING FUNDS
Fiscal Years 1970 and 1975-1978
(In $1,000,000's)



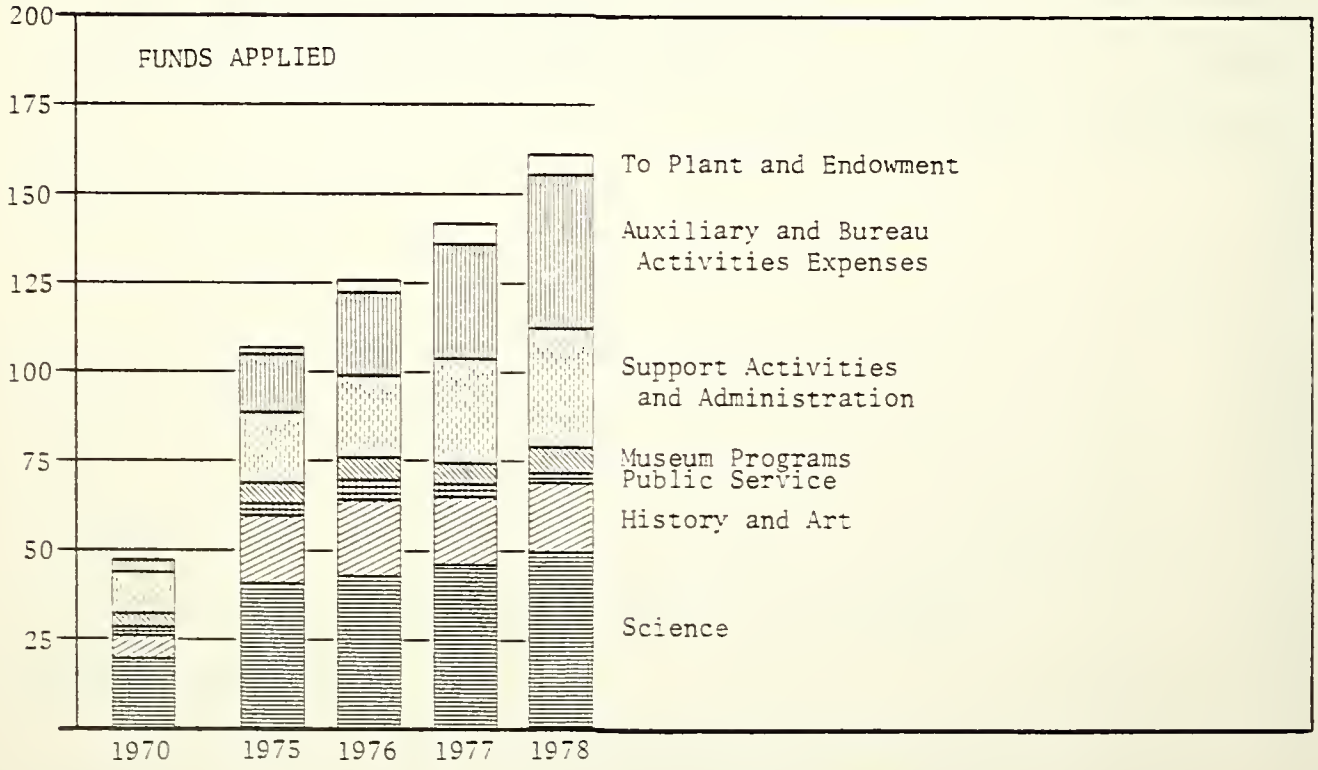


TABLE 1 - Financial Summary

($1,000's)

	FY 1977	FY 1978
Institutional Operating Funds		
FUNDS PROVIDED:		
Federal Appropriations - Salary & Expenses	$ 85,236	$ 93,393
Federal Agency Grants & Contracts	10,515	11,157
Non-Appropriated Trust Funds:		
For Restricted Purposes	4,407	6,538
For Unrestricted & Special Purposes:		
Auxiliary & Bureau Acts. Revenues - Gross	41,923	55,201
Less Related Expenses	(32,838)	(43,570)
Auxiliary & Bureau Activities Net Income	9,085	11,631
Other Unrest. & Special Purp. Income	1,637	2,229
Total Net Unrest. & Spec. Purp. Income	10,722	13,860
Total Non-Approp. Trust Funds* - Gross	47,967	63,968
- Net	15,129	20,398
Total Operating Funds Provided - Gross	143,718	168,518
- Net	$110,880	$124,948
FUNDS APPLIED:		
Science	45,677	49,744
History & Art	18,688	19,620
Public Service	2,807	2,376
Museum Programs	6,820	7,454
Support Activities	22,523	26,175
Administration - Federal	5,644	6,161
-Non-Appropriated Trust Funds	5,373	5,875
-Less Overhead Recovery	(4,592)	(5,200)
Total Operating Funds Applied	102,940	112,405
Transfers (Non-Approp. Trust Funds)		
Unrestricted Funds:		
-To Plant	559	869
-To Endowments	5,521	3,271
Restricted Funds:		
-To Endowments	171	1,261
Total Operating Funds Applied & Transferred Out	$109,191	$117,806
CHANGES IN NON-APPROP. TRUST FUND BALANCES:		
Restricted Purpose (Incl.Fed.Agency Gr. & Contr.)	(194)	980
Unrestricted - General Purpose	8	850
-Special Purposes	1,875	5,312
Total	$ 1,689	$ 7,142
YEAR-END BALANCES - NON-APPROP. TRUST FUNDS:		
Restricted Purpose	3,560	4,540
Unrestricted - General	4,082	4,932
-Special	4,292	9,604
Total	$ 11,934	$ 19,076
OTHER FEDERAL APPROPRIATIONS		
Smithsonian Science Information Exchange	1,972	1,857
Foreign Currency Program	3,481	4,000
Construction	9,530	5,250
Total Federal Appropriations (Incl. S&E above)	$100,219	$104,500

*Figures do not include gifts and other income directly to Plant and Endowment Funds: FY 1977 - $239,000; FY 1978 - $185,000.

(In $1,000's) TABLE 2 - Source and Application of Operating Funds
Year Ended September 30, 1978
(Excludes SSIE, Special Foreign Currency Funds, Plant Funds and Endowments

Funds	Federal funds	Total Nonfederal funds	Nonfederal Funds: Unrestricted: General	Unrestricted: Auxiliary Activities	Unrestricted: Special Purpose	Restricted: General	Restricted: Grants and Contracts
FUND BALANCES - 1 October 1977	$ -0-	$11,934	$4,082	$ -0-	$4,292	$3,518	$ 42
FUNDS PROVIDED							
Federal Appropriations	93,393	-	-	-	-	-	-
Investment Income	-	3,397	1,400	-	175	2,022	-
Grants and Contracts	-	11,157	-	-	-	-	11,157
Gifts	-	4,046	112	442	14	3,478	-
Sales and Revenue	-	54,759	-	53,432	1,327	-	-
Other	-	1,566	36		492	1,038	-
Total Provided	$93,393	$75,125	$1,548	$53,874	$2,008	$6,538	$11,157
Total Available	$93,393	$87,059	$5,630	$53,874	$6,300	$10,056	$11,199
FUNDS APPLIED							
Science:							
Natl. Museum of Nat. History	$12,447	$ 1,892	$ 125	$ -	$ 282	$ 474	$ 1,011
Astrophysical Observatory	4,613	8,439	15	-	40	130	8,254
Tropical Research Institute	1,743	183	49	-	79	41	14
Radiation Biology Lab.	1,721	117	-	-	6	19	92
Chesapeake Bay Center	626	633	108	-	37	1	487
Natl. Air and Space Museum	5,777	1,185	31	-	939	39	176
Natl. Zoological Park	7,584	271	33	-	51	96	91
Center for Study of Man	843	80	3	-	-	15	62
Fort Pierce Bureau	-	338	-	-	-	338	-
Fellowships and Grants	691	28	17	-	-	11	-
Other	755	525	73	-	-	34	418
Total Science	$36,800	$13,691	$ 454	$ -	$1,434	$1,198	$10,605
History and Art:							
Natl. Museum of History and Technology	6,405	777	10	-	243	501	23
Natl. Collection of Fine Arts	2,928	211	96	-	65	55	(5)
Natl. Portrait Gallery	2,128	258	18	-	22	118	100
Hirshhorn Museum	2,034	51	17	-	15	19	-
Freer Gallery of Art	576	957	-	-	1	956	-
Archives of American Art	458	300	-	-	-	300	-
Cooper-Hewitt Museum	349	1,323	363	-	21	900	39
American & Folklife Studies	276	240	134	-	30	16	60
Other	243	129	77	-	2	1	49
Total History and Art	$15,397	$4,246	$ 715	$ -	$ 399	$2,866	$ 266

TABLE 2 - Source and Application of Operating Funds - Continued
Year Ended September 30, 1978

(In $1,000's)

Funds	Federal funds	Total Nonfederal funds	Nonfederal Funds Unrestricted General	Nonfederal Funds Unrestricted Auxiliary Activities	Nonfederal Funds Unrestricted Special Purpose	Nonfederal Funds Restricted General	Nonfederal Funds Restricted Grants and Contracts
Public Service							
Anacostia Museum	$ 557	$ 108	$ 24	$ -	$ 15	$ 69	$ -
Smithsonian Press	717	583	-	551	-	-	32
Performing Arts	299	1,882	12	1,752	57	21	60
Exposition Books	-	2,546	-	2,546	-	-	-
Other Public Service	638	390	95	285	11	14	(15)
Total Public Service	2,211	5,509	131	5,134	63	104	77
Museum Programs							
Conservation Analytical Lab.	510	-	-	-	-	-	-
Libraries	2,204	144	144	-	-	-	-
Exhibits	1,141	10	-	-	15	(5)	-
Traveling Exhibition Svc.	154	620	-	575	-	-	45
National Museum Act	793	-	-	-	-	-	-
Other Museum Programs	2,319	143	31	-	11	101	-
Total Museum Programs	7,121	917	175	575	26	96	45
Other Activities							
Associates Program	-	27,328	-	27,285	2	(5)	46
Business Management	-	9,382	-	9,380	2	-	-
Total Other Activities	-	36,710	-	36,665	4	(5)	46
Support Activities	25,703	817	324	334	127	32	-
Administration	6,049	5,892	1,065	1,762	264	506	2,295
Overhead Recovery		(5,200)	(590)	(1,762)	(171)	(430)	(2,247)
Transfers Out/(In)							
Treasury	112*	-	-	-	-	-	-
Coll. Acq., Schol.St.,Outreach	-	-	2,000	-	(2,000)	-	-
Collect. Acquis. Reserves	-	-	2,000	-	(2,000)	-	-
Liability Reserves	-	-	1,000	-	(1,000)	-	-
Net Auxiliary Activities	-	-	(11,166)	11,166	-	-	-
Other Designated Purposes	-	-	700	-	(700)	-	-
Plant	-	869	869	-	-	-	-
Endowment	-	4,532	3,021	-	250	1,261	-
Total Transfers	112	5,401	(1,576)	11,166	(5,450)	1,261	-
Total Funds Applied	$93,393	$67,983	$ 698	$53,874	(3,304)	$5,628	$11,087
FUND BALANCES 9/30/78	$ -0-	$19,076	$4,932	$ -0-	$9,604	$4,428	$ 112

*Unobligated funds returned to Treasury.

TABLE 3 - Grants and Contracts - Expenditures

(In $1,000's)

FEDERAL AGENCIES	FY 1976	Trans. Quarter	FY 1977	FY 1978
Department of Commerce.....	$ 218	$ 90	$ 82	$ 63
Department of Defense.....	800	212	998	968
Department of Energy.....	85	48	157	266
Department of Health, Education and Welfare.....	255	79	282	311
Department of Interior.....	272	48	155	4
Department of Labor.....	162	177	33	1
Department of State.....	1,252	242	282	15
Environmental Protection Agency.....	118	45	452	422
National Aeronautics and Space Administration.....	6,222	1,845	6,346	7,324
National Endowment for the Arts and Humanities.....	451	174	356	226
National Science Foundation.....	432	128	315	400
Other.....	1,258	899	1,113	1,087
Total.....	$11,525	$3,987	$10,571	11,087

TABLE 4 - Restricted Operating Trust Funds
Fiscal Years 1976 - 1978
(In $1,000's)

Item	Investment	Gifts	Misc.	Total Income	Deductions	Transfers In (Out)	Net Increase (Decrease)	Fund Balance End of Year
FY 1976 & TQ - Total.....	$2,137	$4,965	$686	$7,788	$8,357	$ 179	$(390)	$3,984
FY 1977 - Total.....	$1,690	$1,724	$993	$4,407	$4,901	$ 354	$(140)	$3,518*
FY 1978:								
Museum of Nat. History.....	$ 121	$1,463	$ 8	$1,592	$ 474	$(1,099)	$ 19	$ 506
Astrophysical Observ.....	3	155	1	159	130	79	108	8
Natl. Air & Space Museum....	90	-	-	90	39	(15)	36	1,012
Ft. Pierce Bureau.....	594	-	-	594	338	-	256	377
Museum of Hist. & Tech.	41	276	10	327	501	(7)	(181)	366
Natl. Collect. of Fine Arts.	23	97	18	138	55	-	83	147
Freer Gallery of Art.....	767	15	222	1,003	956	-	47	260
Archives of American Art....	28	97	172	297	300	-	(3)	175
Cooper-Hewitt - Operating...	9	136	544	689	685	4	8	8
- Other.....	36	76	31	143	215	(5)	(77)	319
National Portrait Gallery...	18	424	-	442	118	6	330	339
Hirshhorn Museum.....	3	254	-	257	19	-	238	253
Anacostia Neighborhood Mus..	-	79	-	79	69	-	10	3
Other.....	289	406	32	728	468	(224)	36	655
Total FY 1978.....	$2,022	3,478	1,038	$6,538	$4,367	$(1,261)	$ 910	$4,428

*Exclusive of funds of Woodrow Wilson International Center for Scholars ($326,414 as of 9/30/76) reclassified as Agency Funds.

TABLE 5 - Unrestricted Special Purpose Funds
Fiscal Years 1976 - 1978
(In $1,000's)

	Invest-ment	Bureau Act-ivities	Gifts & Other Revenue	Total Income	Transfers In/(Out)	Deductions: Program Expense	Deductions: Bureau Activity Expense	Net Increase (Decrease)	Fund Balance End of Year
FY 1976 and TQ.....	$ 3	$ 630	$787	$1,420	$1,245	$ 952	$296	$1,417	$2,488
FY 1977.....	$ 3	$1,721	$387	$2,111	$ 828	$ 447	$617	$1,875	$4,292*
* * * * * * * * * * * * * * * * * *									
Museum of Nat. History.....	$ 7	$ 3	$ 30	$ 40	$ 544	$ 281	$ 1	$ 302	$ 440
Astrophysical Observ.	1	-	17	18	174	40	-	152	173
Tropical Rsch. Inst.	-	67	-	67	71	17	62	59	76
Natl. Air & Space Museum....	79	1,152	94	1,325	(26)	255	684	360	1,931
Natl. Zoological Park.....	29	-	128	157	70	51	-	176	619
Museum of Hist. & Tech.	21	8	36	65	190	238	5	12	449
Natl. Collect. Fine Arts....	10	4	45	59	23	60	5	17	200
Hirshhorn Museum.....	5	-	9	14	55	15	-	54	122
Exhibits Central.....	3	-	10	13	-	15	-	(2)	47
Liability Reserves.....	-	-	-	-	1,000	-	-	1,000	1,900
Unallocated Acquisition Research & Education.....	-	-	-	-	1,042	-	-	1,042	1,042
Collections Acq. Reserve....	-	-	-	-	2,000	-	-	2,000	2,000
Support Activities & Other..	20	93	137	250	307	312	105	140	605
FY 1978 Total.....	$175	$1,327	$506	$2,008	$5,450**	$1,284	$862	$5,312	$9,604

*Exclusive of funds of Woodrow Wilson International Center for Scholars ($70,655 as of 9/30/76) reclassified as Agency Funds.

**Includes transfer of $250,000 to Lindbergh Chair Endowment.

TABLE 6 - Unrestricted Trust Funds
General and Auxiliary Activities
(Excluding Special Purpose Funds and Gifts to Endowment)
(In $1,000's)

Item	FY 1976	Trans. Quarter	FY 1977	FY 1978
INCOME				
General Income:				
Investments	$1,107	$ 263	$1,154	$1,400
Gifts	66	16	48	112
Miscellaneous	54	13	45	36
Total General Income	1,227	292	1,247	1,548
Auxiliary Activities (net):				
Associates	3,256	1,011	6,416	7,441
Shops, Product Development, and Mail Order Division	521	261	828	738
Press	(146)	(46)	(108)	(199)
Performing Arts	(110)	(9)	(343)	253
Exposition Books	-	-	(131)	2,105
Concessions	657	517	1,651	1,567
Other Activities	(131)	(70)	(332)	(739)
Total Activities	4,047	1,664	7,981	11,166
Total Income	5,274	1,956	9,228	12,714
EXPENDITURES AND TRANSFERS				
Administrative and Program Expense	5,024	1,530	6,382	7,474
Less Administrative Recovery	4,558	1,201	4,592	5,200
Net Expense	466	329	1,790	2,274
Less Transfers:				
To Special Purpose and Restricted Funds for Program Purposes	1,151	499	1,350	5,700
To Plant Funds	2,495	207	559	869
To Endowment Funds	1,021	755	5,521	3,021
NET GAIN (LOSS)	141	166	8	850
ENDING BALANCE	$3,908	$4,074	$4,082	$4,932

TABLE 7 - Auxiliary Activities for Fiscal Year 1978
(In $1,000's)

Item	Total	Museum Shops*	Smithsonian Press**	Smithsonian Associates	Performing Arts	Exposition Books	Concessions	Other***
Sales and Other Revenue.	$53,432	$9,560	$352	$34,285	$2,005	$4,651	$1,685	$894
Gifts.....	442	-	-	442	-	-	-	-
Less Cost of Sales....	23,536	5,141	240	16,013	664	1,449	-	29
Gross Income.....	30,338	4,419	112	18,714	1,341	3,202	1,685	865
Expenses.....	17,410	3,245	299	10,330	965	1,033	100	1,438
Administrative Costs....	1,762	436	12	943	123	64	18	166
Income (Loss) Before Transfers.....	11,166	738	(199)	7,441	253	2,105	1,567	(739)
Transfers In/Out.....	(390)	(210)#	-	-	-	-	(180)#	-
Net Income	$10,776	$ 528	$(199)	$ 7,441	$ 253	$2,105	$1,387	$(739)

*Includes Product Development and Mail Order Programs.
**The privately funded activities of the Press as opposed to the federally supported publication of research papers.
***Includes Traveling Exhibitions, Belmont Conference Center, Photo Sales, Telecommunications, and Business Management Office.
#Allocations to the Smithsonian bureaux participating in this program.

TABLE 8 - Special Foreign Currency Program
Fiscal Year 1978 - Obligations

Country	Archeology	Systematic & Environmental Biology	Astrophysics & Earth Sciences	Museum Programs	Grant Administration	Total
Burma	$ -	$ 76	$ -	$ -	$ -	$ 76
Egypt	2,132,335	102,449	73,192	9,962	6,297	2,324,235
India	1,344,603	69,728	32,156	54,735	58,472	1,559,694
Pakistan	74,082	147,057	-	1,268	-	222,407
Guinea	-	-	-	2,813	-	2,813
TOTAL	$3,551,020	$319,310	$105,348	$68,778	$64,769	$4,109,225 *

*An additional $21,000 was obligated through the National Science Foundation for the translation and printing of scientific publications in India requested by the Smithsonian Institution.

TABLE 9 - Construction and Plant Funds
Fiscal Years 1976 - 1978

(In $1,000's)

Sources	FY 1976	Transition Quarter	FY 1977	FY 1978
FUNDS PROVIDED				
Federal Appropriations:				
National Zoological Park.....	$ 8,590	$1,440	$6,580	$2,500
National Air & Space Museum...	2,500	-	-	-
Museum Support Center.....	-	-	-	325
Restoration & Renov. of Bldgs.	1,192	400	2,950	2,425
Total Federal Appropriations	$12,082	$1,840	$9,530	$5,250
Non-appropriated Trust Funds:				
Income - Gift and Other				
Cooper-Hewitt Museum.....	$ 425	$ 30	$ 3	$ 60
Chesapeake Bay Center.....	5	-	2	-
National Zoological Park....	100	-	-	-
Total Income.....	$ 530	$ 30	$ 5	$ 60
Transfers from Current Funds:				
Cooper-Hewitt Museum.....	$ 425	$ -	$ 195	$ (10)
Chesapeake Bay Center.....	70	12	95	344
NMNH-West Court & Shops.....	2,000	195	269	-
SI Building Improvements....	-	-	-	355
Barney House.....	-	-	-	70
National Zoological Park....	-	-	-	110
Total Transfers.....	$ 2,495	$ 207	$ 559	$ 869
Total Trust Funds.....	$ 3,025	$ 237	$ 564	$ 929
Total Funds Provided.....	$15,107	$2,077	$10,094	$6,179

TABLE 10 - Endowment and Similar Funds*
Summary of Investments September 30, 1978

Accounts	Book Value	Market Value
INVESTMENT ACCOUNTS		
Consolidated Endowment Funds:		
Cash and Equivalents	$ 356,677	$ 356,677
Bonds	15,913,468	16,030,543
Convertible Bonds	1,065,522	1,105,375
Stocks	35,412,095	39,537,817
Total	$52,747,762	$57,030,412
Miscellaneous:		
Cash	$ -0-	$ -0-
Bonds	9,769	9,400
Common Stocks	3,572	14,780
Total	$ 13,341	$ 24,180
Total Investment Accounts	$52,761,103	$57,054,592
Other Accounts:		
Notes Receivable	$ 42,370	$ 42,370
Loan to U.S. Treasury in Perpetuity	1,000,000	1,000,000
Total Other Accounts	$ 1,042,370	$ 1,042,370
Total Endowment and Similar Fund Balances	$53,803,473	$58,096,962

*Includes both true endowment, whose income only may be expended, and quasi endowments, whose principal as well as income may be used for current purposes on approval of the Board of Regents.

TABLE 11 - Market Values of Consolidated Endowment Funds*
(In $1,000's)

Fund	6/30/74	6/30/75	9/30/76	9/30/77	9/30/78
Unrestricted	$ 3,906	$ 5,654	$ 7,477	$11,695	$17,206
Freer	14,250	15,744	16,035	15,410	16,807
Endowment No. 3	11,128	12,321	12,701	12,343	13,462
Restricted	6,266	7,148	7,420	7,431	9,555
Total	$35,550	$40,867	$43,633	$46,879	$57,030

*Not including Endowment Funds of $1,000,000 held in the United States Treasury, carrying 6 percent interest, nor minor amount of miscellaneous securities treated separately.

TABLE 12 - Changes in Consolidated Endowment Funds for Fiscal Year 1978
(In $1,000's)

Fund	Market Value 9/30/77	Gifts and transfers	Interest and dividends*	Income paid out	Sub-total	Increase in market value	Market value 9/30/78
Unrestricted funds.....	$11,695	$3,250	$ 592	$ 637	$14,900	$2,306	$17,206
Freer Fund.....	15,410	-	672	724	15,358	1,449	16,807
Endowment No. 3.....	12,343	-	538	580	12,301	1,161	13,462
Restricted funds.....	7,431	1,409	334	362	8,812	743	9,555
Total**.....	$46,879	$4,659	$2,136	$2,303	$51,371	$5,659	$57,030

*Income earned less managers fees.
**Not including Endowment Funds of $1,000,000 held in the United States Treasury, carrying 6 percent interest, nor minor amount of miscellaneous securities treated separately.

TABLE 13 - Consolidated Endowment Funds
September 30, 1978

Funds participating in pool	Principal		Income	
	Book Value	Market Value	Net Income	Unexpended Balance
UNRESTRICTED FUNDS:				
General	$16,264,419	$16,956,569	$ 637,157	$ -0-
Dedicated-Lindbergh Chair of Aerospace History	250,000	250,000	-0-	-0-
Total Unrestricted Funds	$16,514,419	$17,206,569	$ 637,157	$ -0-
FREER	15,132,866	16,806,877	723,758	208,613
ENDOWMENT NO. 3	12,323,203	13,462,028	579,718	176,750
RESTRICTED FUNDS:				
Abbott, William L.	198,950	221,548	9,541	-0-
Armstrong, Edwin James	4,708	4,646	195	-0-
Arthur, James	57,623	83,135	3,580	450
Bacon, Virginia Purdy	174,725	173,905	7,446	23,518
Baird, Spencer Fullerton	53,007	74,314	3,200	134
Barney, Alice Pike	41,328	59,575	2,566	6,063
Barstow, Frederic D.	1,907	2,121	91	2,339
Batchelor, Emma E.	63,805	61,624	2,654	18,732
Beauregard, Catherine Memorial Fund	74,759	83,251	3,573	6,764
Becker, George F.	300,086	299,267	12,887	11,241
Brown, Roland W.	49,530	57,136	2,452	8,194
Canfield, Frederick A.	53,953	91,596	3,944	1,094
Casey, Thomas Lincoln	73,926	26,690	1,149	1,087
Chamberlain, Frances Lea	40,577	58,495	2,519	7,434
Cooper, G. Arthur, Curator's Fund	7,401	7,965	282	1
Cooper-Hewitt Museum	153,077	144,170	6,195	-0-
Desautels, Paul E.	15,630	18,124	755	3
Div. of Mammals Curator Fund	3,316	3,503	149	2,080
Div. of Reptiles Curator Fund	2,198	2,333	100	209
Drake, Carl J.	299,036	303,023	12,851	48,067
Dykes, Charles	82,176	91,623	3,946	12,457
Eickemeyer, Florence Brevoort	15,664	22,570	972	6,437
Guggenheim, David & Florence	232,241	214,510	9,207	64
Hanson, Martin Gustav and Caroline Runice	16,969	18,919	815	2,513
Henderson, Edward P. Meteorite Fund	587	739	32	141
Hillyer, Virgil	12,546	13,996	603	5,574
Hitchcock, Albert S.	2,269	3,330	143	756
Hrdlicka, Ales and Marie	89,712	103,500	4,457	3,973
Hughes, Bruce	27,576	39,806	1,714	10,867
Johnson, E. R. Fenimore	15,540	14,008	608	7,816
Kellogg, Remington, Memorial	46,942	41,624	1,790	6,592
Kramar, Nada	5,153	5,441	234	528
Lindbergh, Charles A.	6,136	6,730	290	1,166

TABLE 13 - Consolidated Endowment Funds
September 30, 1978

Funds participating in pool	Principal		Income	
	Book Value	Market Value	Net Income	Unexpended Balance
Lindsey, Jessie H.	$ 1,303	$ 1,372	$ 59	$ 2,030
Loeb, Morris.....	166,632	187,640	8,080	2,626
Long, Annette E. and Edith C.	780	1,158	50	147
Lyons, Marcus Ward.....	8,335	7,563	339	3
Maxwell, Mary E.	28,259	40,784	1,756	6,806
Mineral Endowment.....	179,831	183,170	7,862	5,563
Mitchell, William A.	24,421	25,057	1,075	2,143
Myer, Catherine Walden.....	38,566	43,004	1,852	1,910
Natural History and Conservation.....	14,431	15,529	356	-0-
Nelson, Edward William.....	34,607	46,186	1,989	3,064
Noyes, Frank B.	1,849	2,167	93	1,743
Pell, Cornelia Livingston...	14,162	15,875	684	1,132
Petrocelli, Joseph, Memorial	10,675	15,470	666	9,951
Ramsey, Admiral and Mrs. DeWitt Clinton.....	504,072	463,943	19,686	9,460
Rathbun, Richard, Memorial..	20,316	22,747	980	12,786
Reid, Addison T.	33,949	37,888	1,616	6,214
Roebling Collection.....	174,179	249,497	10,744	9,644
Roebling Solar Research.....	47,299	48,907	2,106	415
Rollins, Miriam and William.	312,424	391,023	16,610	1,242
Ruef, Bertha M.	60,608	54,590	2,351	4,321
Schultz, Leonard P.	24,703	25,634	1,104	8,588
Seidell, Atherton.....	1,193,671	1,182,351	7,899	10,562
Smithsonian Agency Account..	276,899	276,366	11,406	6,323
Sprague, Joseph White.....	2,293,121	2,338,805	99,187	18,324
Springer, Frank.....	26,119	37,230	1,603	20,112
Stern, Harold P., Memorial..	134,190	141,178	3,088	2,434
Stevenson, John A.	9,210	10,171	437	82
Strong, Julia D.	19,096	21,375	921	1,161
Walcott, Charles D.	202,217	242,963	10,321	586
Walcott, Charles D. and Mary VAux.....	663,104	955,244	41,136	13,107
Walcott Botanical Publications.....	83,823	115,877	4,990	7,064
Zerbee, Francis Brinckle....	1,370	1,957	84	1,992
Total Restricted Funds....	$8,777,274	$9,554,938	$362,065	$367,849
Total Consolidated Endowment Funds.....	$52,747,762	$57,030,412	$2,302,698	$952,903

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The Board of Regents
Smithsonian Institution:

We have examined the balance sheet of the Trust Funds of Smithsonian Institution as of September 30, 1978 and the related statement of changes in fund balances for the year then ended. Such statements do not include the accounts of the National Gallery of Art, the John F. Kennedy Center for the Performing Arts, or other departments, bureaus and operations administered by the Institution under Federal appropriations as detailed in note 2 to the financial statements. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the financial position of the Trust Funds of Smithsonian Institution at September 30, 1978 and the changes in its fund balances for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

December 15, 1978

SMITHSONIAN INSTITUTION - TRUST FUNDS

Balance Sheet

September 30, 1978
(with comparative figures at September 30, 1977)

Assets	1978	1977
Current funds:		
Cash	$ 2,692,918	1,223,287
Investments (note 5)	17,372,508	11,689,366
Receivables:		
Accounts and notes, less allowance for doubtful accounts of $380,141 ($459,000 in 1977)	6,823,230	4,324,341
Advances - travel and other	420,710	528,976
Unbilled costs and fees - grants and contracts	1,316,166	2,673,721
Due from agency funds	219,253	123,046
Total receivables	8,779,359	7,650,084
Inventories	3,930,770	2,455,538
Prepaid expenses	1,434,755	767,709
Deferred expenses	3,809,267	3,830,739
Capitalized improvements and equipment, used in income-producing activities, net of accumulated depreciation and amortization of $585,349 ($410,251 in 1977)	1,273,899	1,283,604
Total current funds	$ 39,535,474	28,900,327
Endowment and similar funds:		
Cash, net of receivables and payables on securities transactions	157,760	219,381
Notes receivables	42,370	44,323
Due from current funds	198,916	374,442
Investments (note 3)	52,404,427	46,339,719
Loan to U. S. Treasury in perpetuity at 6%	1,000,000	1,000,000
Total endowment and similar funds	$ 53,803,473	47,977,865
Plant funds:		
Due from current funds	342,738	38,340
Real estate (note 4)	10,701,349	10,343,343
Total plant funds	$ 11,244,087	10,381,683
Agency funds:		
Investments	10,000	10,000
Due from current funds	1,392,879	1,521,129
Total agency funds	$ 1,402,879	1,531,129

Liabilities and Fund Balances	1978	1977
Current funds:		
Accounts payable and accrued liabilities	$ 3,885,700	3,526,370
Due to plant funds	342,738	38,340
Due to agency funds	1,392,879	1,521,129
Due to endowment and similar funds	198,916	374,442
Deferred income:		
Magazine subscriptions	12,059,452	9,971,596
Other	2,379,668	1,534,228
Total liabilities	20,459,353	16,966,105
Fund balances:		
Unrestricted:		
General purpose	4,932,516	4,081,653
Special purpose	9,603,694	4,292,028
Total unrestricted	14,536,210	8,373,681
Restricted	4,539,911	3,560,541
Total fund balances	19,076,111	11,934,222
Total current funds	$ 39,535,474	28,900,327
Endowment and similar funds:		
Fund balances:		
Endowment	33,833,103	32,879,201
Quasi-endowment:		
Restricted	3,486,862	2,211,891
Unrestricted	16,483,508	12,886,773
Total quasi-endowment	19,970,370	15,098,664
Total endowment and similar funds	$ 53,803,473	47,977,865
Plant funds:		
Accrued liabilities	1,030	3,175
Mortgage notes payable (note 4)	81,700	129,800
Fund balances:		
Acquisition fund:		
Unrestricted	480,608	32,498
Restricted	60,300	668
Total acquisition funds	540,908	33,166
Investment in plant	10,618,149	10,213,534
Total plant funds	$ 11,244,087	10,381,683
Agency funds:		
Due to current funds	219,253	123,048
Deposits held in custody for others	1,183,626	1,408,081
Total agency funds	$ 1,402,879	1,531,129

See accompanying notes to financial statements.

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SMITHSONIAN INSTITUTION - TRUST FUNDS

Statement of Changes in Fund Balances

Year ended September 30, 1978

	Current funds							Plant funds	
		Unrestricted							
	Total current funds	Total unrestricted funds	General purpose	Auxiliary activities	Special purpose	Restricted	Endowment and similar funds	Acquisition	Investment in plant
Revenue and other additions:									
Auxiliary enterprises revenue	$ 34,759,388	34,759,388	-	33,432,037	1,327,351	-	-	-	-
Federal grants and contracts	11,157,066	-	-	-	-	11,157,066	-	-	-
Investment income (net of $167,721 management and custodian fees)	3,429,901	1,529,314	1,354,942	-	174,372	1,900,387	-	-	-
Gains on sale of securities	-	-	-	-	-	-	1,334,983	-	-
Gifts, bequests and foundation grants	4,046,505	568,357	112,158	441,959	14,240	3,478,148	124,900	60,000	-
Additions to equity in real estate	-	-	-	-	-	-	-	-	404,605
Rentals, fees and commissions	784,210	784,210	389,953	-	194,257	-	-	-	-
Other - net	1,371,431	333,219	33,798	-	297,421	1,038,212	-	-	-
Total revenue and other additions	75,548,501	37,974,688	2,092,851	33,873,996	2,007,841	17,573,813	1,459,883	60,000	404,605
Expenditures and other deductions:									
Research and educational expenditures	15,759,210	2,981,311	1,797,289	-	1,184,022	12,777,899	-	-	-
Administrative expenditures	5,675,636	2,998,816	1,065,592	1,762,100	171,134	2,676,810	-	-	-
Auxiliary enterprises expenditures	41,737,456	41,737,456	-	40,945,975	791,481	-	-	-	-
Expended for real estate and equipment	-	-	-	-	-	-	-	365,992	-
Retirement of indebtedness	-	-	-	-	-	-	-	46,600	-
Interest on indebtedness	-	-	-	-	-	-	-	8,241	-
Total expenditures and other deductions	63,172,302	47,717,593	2,862,881	42,708,075	2,146,637	15,454,709	-	420,833	-
Transfers among funds - additions (deductions):									
Mandatory - principal and interest on notes	(54,841)	(54,841)	(54,841)	-	-	-	-	54,841	-
Portion of investment gain appropriated for plant acquisition	166,548	45,168	45,168	-	-	121,380	(166,548)	-	-
	(813,734)	(813,734)	(813,734)	-	-	-	-	813,734	-
Income added to endowment principal	(81,852)	(106)	(106)	-	-	(81,746)	81,852	-	-
Appropriated as quasi-endowment	(4,450,421)	(3,271,053)	(3,021,053)	-	(250,000)	(1,179,368)	4,450,421	-	-
For designated purposes	-	-	(3,310,104)	(390,358)	3,700,462	-	-	-	-
Net increase in auxiliary activities	-	-	10,775,563	(10,775,563)	-	-	-	-	-
Total transfers among funds - additions (deductions)	(5,234,300)	(4,094,566)	1,620,893	(11,165,921)	3,450,462	(1,132,734)	4,365,725	868,575	-
Net increase for the year	7,141,899	6,162,529	850,863	-	3,311,666	979,370	5,825,608	507,742	404,605
Fund balance at September 30, 1977	11,934,222	8,373,681	4,081,653	-	4,292,028	3,360,541	47,977,863	33,166	10,213,544
Fund balance at September 30, 1978	$ 19,076,121	14,536,210	4,932,516	-	7,603,694	4,339,911	53,803,473	540,908	10,618,149

See accompanying notes to financial statements.

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SMITHSONIAN INSTITUTION - TRUST FUNDS

Notes to Financial Statements

September 30, 1978

(1) Summary of Significant Accounting Policies and General Information

(a) Accrual Basis - The financial statements of Smithsonian Institution - Trust Funds have been prepared on the accrual basis, except for depreciation of plant fund assets as explained in note 1(h) below, and are in substantial conformity with generally accepted accounting principles included in the American Institute of Certified Public Accountants Audit Guide, "Audits of Colleges and Universities."

(b) Current funds include capitalized improvements and equipment use in income-producing activities having a net carrying value of $1,275,899 and $1,283,604 at September 30, 1978 and September 30, 1977, respectively. Current funds used to finance the acquisition of plant assets and for provisions for debt amortization and interest are accounted for as transfers to the plant fund.

Separate sub-fund groups of current unrestricted funds have been reflected in the statement of changes in fund balances for auxiliary activities (representing primarily the revenues and expenditures of the Smithsonian Associates Program, including the Smithsonian Magazine, and museum shop sales) and Special Purposes (representing internally segregated funds for certain designated purposes).

(c) Fund Accounting - In order to ensure observance of limitations and restrictions placed on the use of the resources available to the Institution, the accounts of the Institution are maintained in accordance with the principles of "fund accounting." This is the procedure by which resources for various purposes are classified for accounting and reporting purposes into funds that are in accordance with activities or objectives specified. Separate accounts are maintained for each fund; however, in the accompanying financial statements, funds that have similar characteristics have been combined into fund groups. Accordingly, all financial transactions have been recorded and reported by fund group.

Within each fund group, fund balances restricted by outside sources are so indicated and are distinguished from unrestricted funds allocated to specific purposes by action of the governing board. Externally restricted funds may only be utilized in accordance with the purposes established by the source of such funds and are in contrast with unrestricted funds over which the governing board retains full control to use in achieveing any of its institutional purposes.

Endowment funds are subject to the restrictions of gift instruments requiring in perpetuity that the principal be invested and income only be utilized. Also classified as endowment funds are gifts which will allow the expenditure of principal but only under certain specified conditions.

(Continued)

SMITHSONIAN INSTITUTION - TRUST FUNDS

Notes to Financial Statements

While quasi-endowment funds have been established by the governing board for the same purposes as endowment funds, any portion of such funds may be expended. Restricted quasi-endowment funds represent gifts for restricted purposes where there is no stipulation that the principal be maintained in perpetuity or for a period of time, but the governing board has elected to invest the principal and expend only the income for the purpose stipulated by the donor.

All gains and losses arising from the sale, collection, or other disposition of investments and other noncash assets are accounted for in the fund which owned such assets. Ordinary income derived from investments, receivables, and the like, is accounted for in the fund owning such assets, except for income derived from investments of endowment and similar funds, which income is accounted for in the fund to which it is restricted or, if unrestricted, as revenues in unrestricted current funds.

All other unrestricted revenue is accounted for in the unrestricted current fund. Restricted gifts, grants, endowment income, and other restricted resources are accounted for in the appropriate restricted funds.

(d) Investments are recorded at cost or fair market value at date of acquisition when acquired by gift.

(e) Inventories are carried at lower of average cost or net realizable value.

(f) Income and expenses with respect to the Institution's magazine and associates' activities are deferred and taken into income and expense over the applicable periods and are reported in the activities section of the current unrestricted funds.

(g) The Institution utilizes the "total return" approach to investment management of endowment funds and quasi-endowment funds. Under this approach, the total investment return is considered to include realized and unrealized gains and losses in addition to interest and dividends. In applying this approach, it is the Institution's policy to provide 4-1/2% of the five year average of the market value of each fund (adjusted for gifts and transfers during this period) as being available for current expenditures; however, where the market value of the assets of any endowment fund is less than 110% of the historic dollar value (value of gifts at date of donation) the amount provided is limited to only interest and dividends received.

(h) Capitalized improvements and equipment used in income-producing activities purchased with Trust Funds are capitalized in the current unrestricted fund at cost (see note 1(b)), and are depreciated on a straight-line basis over their estimated useful lives of five to ten years. Depreciation expense of $181,942 for 1978 is reflected in expenditures of the current funds.

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SMITHSONIAN INSTITUTION - TRUST FUNDS

Notes to Financial Statements

Real estate (land and buildings) are recorded in the plant fund at cost, to the extent that restricted or unrestricted funds were expended therefor, or appraised value at date of gift, except for gifts of certain islands in Chesapeake Bay and the Carnegie Mansion, which have been recorded at nominal values. Depreciation on buildings is not recorded.

All other land, buildings, fixtures and equipment (principally acquired with Federal funds), works of art, living or other specimens are not reflected in the accompanying financial statements.

(i) The agency funds group consists of funds held by the Institution as custodian or fiscal agent for others.

(j) Pension costs are funded as accrued.

(k) The Institution has a number of contracts with the U.S. Government, which primarily provide for cost reimbursement to the Institution. Contract revenues are recognized as expenditures are incurred.

(2) Related Activities

The Trust Funds reflect the receipt and expenditure of funds obtained from private sources, from Federal grants and contracts and from certain business activities related to the operations of the Institution.

Federal appropriations, which are not reflected in the accompanying financial statements, provide major support for the operations and administration of the educational and research programs of the Institution's many museums, art galleries and other bureaus, as well as for the maintenance and construction of related buildings and facilities. In addition, land, buildings and other assets acquired with Federal funds are not reflected in the accompanying financial statements.

The following Federal appropriations were received by the Institution for the fiscal years ended September 30, 1978 and 1977:

	1978	1977
Operating funds	$ 95,250,000	87,208,000
Special foreign currency program	4,000,000	3,481,000
Construction funds	5,250,000	9,530,000
	$ 104,500,000	100,219,000

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SMITHSONIAN INSTITUTION - TRUST FUNDS

Notes to Financial Statements

The Institution provides fiscal and administrative services to certain separately incorporated organizations on which certain officials of the Institution serve on the governing boards. The amounts paid to the Institution by these organizations for the aforementioned services, together with rent for Institution facilities occupied, etc., totaled approximately $409,000 for the year ended September 30, 1978. The following summarizes the approximate expenditures of these organizations for the fiscal years ended September 30, 1978, and September 30, 1977 as reflected in their individual financial statements and which are not included in the accompanying financial statements of the Institution:

	1978	1977
Smithsonian Research Foundation	$ 120,000	2,100,000
Smithsonian Science Information Exchange	2,355,000	3,300,000
Reading Is Fundamental, Inc.	2,260,000	1,100,000
Woodrow Wilson International Center for Scholars	2,079,000	1,500,000

The Smithsonian Research Foundation for the year ended September 30, 1978 did not receive Federal grants and accordingly the corporate structure will be dissolved in fiscal year 1980. Also, in 1979 the Smithsonian Science Information Exchange operations are to be transferred to the U. S. Department of Commerce.

(3) Investments

Quoted market values and carrying values of investments (all marketable securities) of the funds indicated were as follows:

	September 30, 1978		September 30, 1977	
	Carrying value	Market value	Carrying value	Market value
Current funds	$ 17,572,508	17,483,598	11,689,366	11,538,378
Endowment and similar funds	52,404,427	56,697,895	46,339,719	46,237,339
Total investments	$ 69,976,935	74,181,493	58,029,085	57,775,717

(Continued)

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SMITHSONIAN INSTITUTION - TRUST FUNDS

Notes to Financial Statements

Total investment performance is summarized below:

	Net gains (losses)		
	Current funds	Endowment and similar funds	Total
Unrealized gains (losses):			
September 30, 1978	$ (88,910)	4,293,468	4,204,558
September 30, 1977	(150,988)	(103,381)	(254,369)
Unrealized net gains for period	62,078	4,396,849	4,458,927
Realized net gains for period	-	1,334,983	1,334,983
Total net gains for period	$ 62,078	5,731,832	5,793,910

Substantially all of the investments of the endowment and similar funds are pooled on a market value basis (consolidated fund) with each individual fund subscribing to or disposing of units on the basis of the value per unit at market value at the beginning of the month within which the transaction takes place. Of the total units each having a market value of $110.22 ($100.24 in 1977), 341,798 units were owned by endowment, and 173,810 units by quasi-endowment at September 30, 1978.

The following tabulation summarizes the changes in the pooled investments during the year ended September 30, 1978:

	Carrying value	Market	Market value per unit
September 30, 1978	$ 52,548,845	56,831,475	110.22
September 30, 1977	46,546,759	46,433,309	100.24
Increase	$ 6,002,086	10,398,166	9.98

(4) Mortgage Notes Payable

The mortgage notes payable are secured by first deeds of trust on property acquired in connection with the Chesapeake Bay Center. The details of the mortgage notes payable are as follows:

	1978	1977
Mortgage note, payable in semiannual installments of $13,300, plus interest at the prevailing prime rate at the due date of the installment payment but not less than 8%, through July 1, 1980	$ 53,200	79,800
6% mortgage note, payable in semiannual installments of $10,000, plus interest, through November 7, 1979	30,000	50,000
	$ 83,200	129,800

(Continued)

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SMITHSONIAN INSTITUTION - TRUST FUNDS

Notes to Financial Statements

(5) Pension Plan

The Institution has a contributory pension plan providing for the purchase of retirement annuity contracts for those employees meeting certain age and length of service requirements who elect to be covered under the plan. Under terms of the plan, the Institution contributes the amount necessary to bring the total contribution to 12% of the participants' compensation subject to social security taxes and to 17% of the participants' compensation in excess of that amount. The total pension expense for the year ended September 30, 1978 and 1977 was $1,459,325 and $1,134,312, respectively.

(6) Income Taxes

The Institution has been recognized by the Internal Revenue as exempt from income taxation as an organization described in Section 501(c)(3) of the Internal Revenue Code. Organizations described in that section are subject to income taxation only on their unrelated business income as defined under Code Sections 512 et. seq. The Internal Revenue Service is presently considering a Request for Ruling filed by the Institution pertaining to the proper interpretation of the current regulations concerning the method of calculating certain unrelated business income. If the Institution's interpretation is approved, no tax would be imposed on this income. It is the opinion of the Institution that it is also exempt from taxation as an instrumentality of the United States as defined in Section 501(c)(1) of the Code. Organizations described in that section are exempt from all income taxation. Recognition of the dual status will be sought by the Institution. If the Institution's positions should not prevail, income taxes in a substantial amount could be imposed on certain unrelated business income.

SMITHSONIAN INSTITUTION LIBRARIES
3 9088 01683 3055